WinLoG

Version 4
User's Guide

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WinLoG

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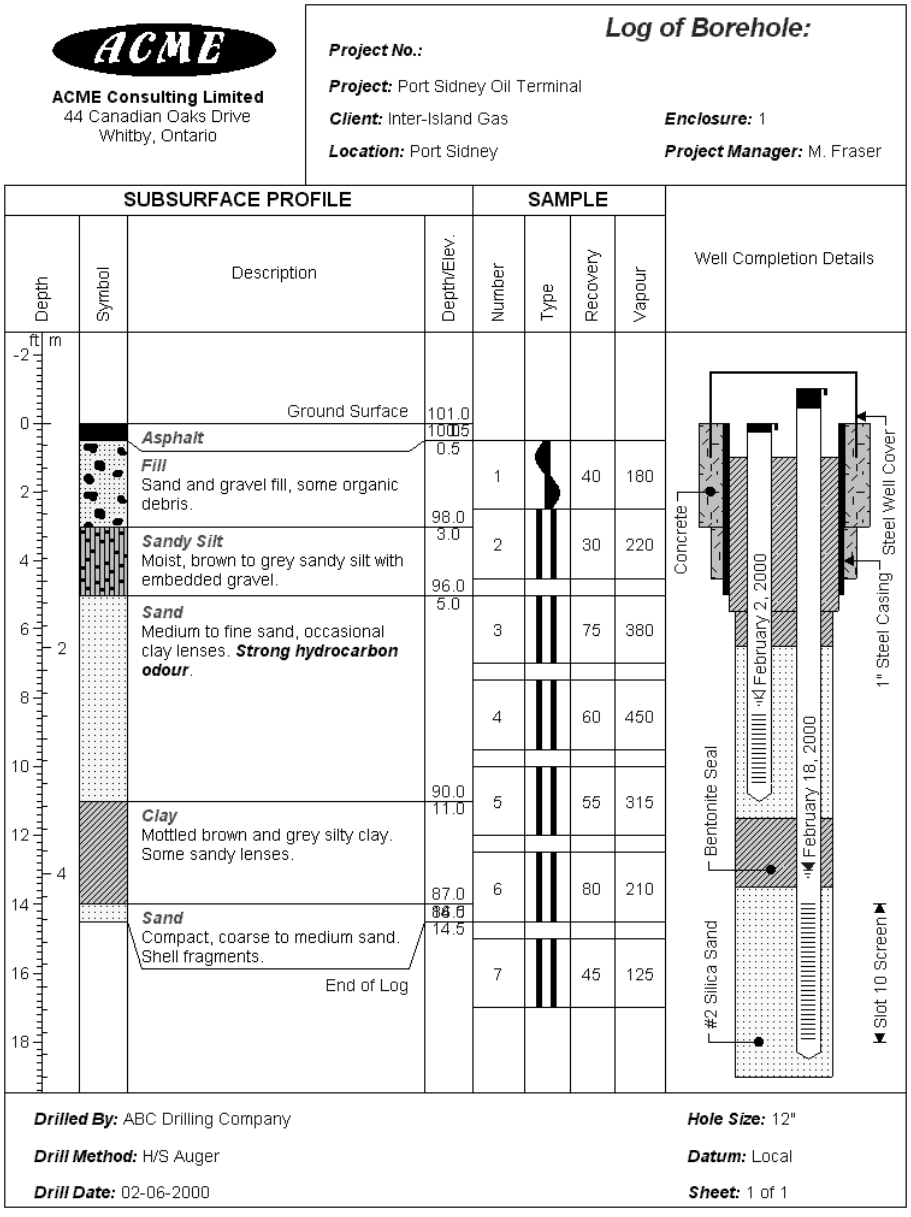
Introduction



Introduction

WinLoG can be used to quickly create, edit and print geotechnical, environmental, mining, water well, oil & gas, and transportation borehole logs. The graphical windows interface displays the log as it is changed and shows exactly how the log will look when it is printed. Borehole and well logs can be printed in black and white or color.

The geographical information system feature added in version 4 displays a location map for the project showing the boreholes, cross-sections, and any surface features. This feature makes it easy to visualize your project and can be used to print a location map of the project. To edit a borehole all you need to do is click on it in the location map.

There are no limits to the number and types of borehole logs that can be created with WinLoG. Logs can contain general borehole data (ex. location, client, project number); lithologic descriptions and symbols; sample data; well completion details; water level measurements; geophysical logs; and numerous graphs and text comments. Once a log is created it can be easily copied using a toolbar button, and then edited and saved to represent other boreholes on the same site.

Templates are used to control the layout and formatting of borehole logs. In general, all of the boreholes in a project would use one or two templates to format the logs. In this way a consistent format can be established within a project and across projects. Once a template is created it is available to all projects.

The program comes with several easily customized templates, which can be edited and saved as new templates. Each template consists of a header, footer, and several columns. Templates can be customized to display different header and footer titles, number and type of columns, and fonts. In addition, the size and location of the above can be easily changed using the mouse. A company logo or site map, stored as a bitmap can also be included in a template.

Legends can be created and customized to shown lithologic symbol, well symbol, and sample symbol definitions. These legends can then be printed for inclusion with the borehole logs.

Borehole log, template, and legend data is stored in Microsoft Access databases. By storing the data in Microsoft Access databases, the data can be easily extracted for use in other programs.

The program is designed around the project concept, where the user has numerous projects and within each project there are numerous borehole logs. Projects can be stored on one computer or numerous computers within a network. A master database is used to keep track of projects and their locations. A more detailed description of the database system is provided at the end of this chapter and in Chapter 3.

Features

The WinLoG program has numerous features to make creating and editing of borehole logs easier and faster. Most of the existing features have been enhanced in Version 4 of the program, and many new features have been added.

New Features

• Graphical Information System (GIS) for displaying and picking boreholes and cross-sections in Winlog with Winfence. GIS can also display site features and import AutoCAD files.

• Project reports can be generated for all data in a project, for example:
- o layer tops and thickness
- o blow counts
- o water content

• Deviated boreholes can be entered and displayed in true depth. Deviation readings can be entered manually or imported from a file. Several methods for calculating true depth are supported.

• Tables (ex. Water Level Readings) can be displayed on boring logs and templates.

• Templates and projects can have password locks that can be used to restrict changes to a template and access to a project.

• AGS format files can be imported and exported.

• gINT, LogPlot, and GTGS files can be imported.

• Data in Excel can be imported into all the logs in a project at the same time. This can be used to import the survey data for all the boreholes from a spreadsheet.

• Continuous logs are supported. These logs span several pages and do not have any page breaks. They are usually printed on tracker feed printers and are used for Geophysical and Mud logging applications

• Program can now automatically update itself to the most recent version. The program searches GAEA Technologies website for any new upgrades to winlog and upgrades the program if the agreed to by the user.

• Program now has online technical support, where it can email technical support all relevant files and information if there is a problem.

• Borehole data can be exported to excel.

• Project databases can be compressed to save disk space and speed up data access.

• A new column type has been added to support percent splits. This is used to show the percentages of different lithologies in a layer.

• A new column type has been added to support core photographs. This is used to show the pictures of cores or downhole images.

• All of the WinLoG databases (Project, Project List, Main Database) are automatically backed up and can be easily restored.

Graphical User Interface Features

- Standard pull•down menus and status line.
- Five floating and dockable toolbars containing the most commonly used commands.
- Multiple windows support.
- On•line context sensitive help.
- Borehole logs can be zoomed in and out.
- Borehole logs can be scrolled between pages.
- Support for all Windows fonts, printers, and displays;
- Support for Imperial and Metric page sizes.
- Windows network compatible.

Project Features

- No limit to the number of projects.
- New projects can be easily created. Project directories are automatically created.
- Existing projects can be opened and closed using toolbar and menu commands.
- Projects can be deleted, including project directories.
- Projects not in master database can be imported into master database.
- Multiple borehole logs in a project can be printed at once.
- Support for uploading and downloading data to Pocket WinLoG on the Pocket PC.

Borehole Log Features

- Standard Windows new, open, save, and print commands.
- No limit to the maximum depth of a borehole log.
- The plot depth per page can be set in the template or changed for each log.

• Borehole data in the headers and footers can contain checkboxes and rich text (font type, size, color, etc. can be modified).

• An unlimited number of floating paragraph text boxes can be added anywhere to a borehole log. The background and frame colors can be specified individually for each text box.

• An unlimited number of bitmap files can be imported into a borehole log. These files can contain logos, site maps, sample pictures, etc.

• An unlimited number of lines, arrows, and rectangles can be added.

• Version 1 and 2 borehole logs can be imported.

• Borehole logs can be imported and exported using a text exchange format.

• Borehole logs can be exported to the Windows clipboard, a bitmap file, a metafile, or an AutoCAD DXF file.

• The ability to import borehole data from Excel files has been added. This feature is available in the Edit menu and can be used to import lithologic descriptions and macros, core macros, samples, graphs, and remarks. Each of these data types is mapped to a range of cells in the spreadsheet. A script file can be created containing the cell ranges for each data type. The script file can then be used to import spreadsheet data into several boreholes without re•entering the cell ranges. In addition to cell ranges, formulas can be entered to calculate the data values from one or two ranges.

Lithologic

• An unlimited number of lithologic layers can be added.

• Each lithologic layer can have an optional title.

• Macros can be used to insert selected text comments into the layer descriptions.

• Macros contain text and symbol definitions, and can be added and edited by the user.

• Layer descriptions can contain rich text (i.e. varying fonts, colors, and symbols).

• Symbols for each lithologic layer can be selected from an unlimited number of lithologic libraries each library contains 18 symbols.

• Lithologic symbols can be split vertically to display two symbols for each layer.

• The contact angle between lithologic symbols can be specified and used to represent gradational contacts.

• The program comes with over 100 lithologic symbols.

• Foreground and background colors can be specified for each lithologic symbol.

• The lines between layers can be individually customized.

• Core logs can be specified at separate intervals and with different lithologies than layers.

Samples

• An unlimited number of soil or rock samples can be added.

• Start depth, length, sample symbol, type, blows/ft, recovery, and other text data can be specified for each sample.

• An unlimited number of other sample columns can be used for a wide variety of text and numeric sample data.

• The lines between samples can be individually customized.

• Sample type symbols can be selected from 30 different symbols.

• Recoveries can be represented as numbers or as a shaded box.

• Blow counts can be shown on one line or four lines.

Wells

• Added Well Macros that can be used to quickly add standard well components, water level information, and text annotation to a log. Macros can be used for single well installation, complex nested wells, above•ground well casings, etc. Well macros can be created using the Well Macros menu item on the File menu, or by saving existing well completion details of a log as a well macro. There is no limit to the number of macros that can be used.

• An unlimited number of wells can be added.

• Wells can be shown using three different methods with varying levels of complexity.

• Wells can be drawn by selecting from a variety of seals, packing material, casings, screens, covers, caps, reducers, tubing, sampling ports, etc.

• Well completion details are drawn in vector mode to scale.

• Wells can contain multiple casings and screens.

• The diameters of the pipes and screens can be varied with depth.

• Horizontal and vertical text annotation can be added to the sides of the well to show completion details and other information.

• Annotation can be connected to well components using three different arrow styles.

• Multiple water levels can be annotated within wells.

Graphs

• An unlimited number of graphs can be added to the borehole log.

• Each graph can contain an unlimited number of data points.

• Graphs can be cross•plotted with lithology.

• Graphs can be combined to form double graphs.

• Graph data can be shown as bar charts, lines, data points, or filled curves.

• Horizontal axis can be plotted in log or linear scale.

• Graph can contain a grid and point labels.

Text Columns

• An unlimited number of text columns can be added to a borehole log.

• Each text column can contain an unlimited number of text comments.

• Text comments can contain rich text, symbols, and lines.

Geophysical Data

• An unlimited number of geophysical logs can be imported into a borehole log.

• A wide variety of standard formats are supported.

• Geophysical logs can be cross•plotted with lithology.

• Either one or two geophysical logs can be displayed in a column.

Template Features

• New templates can be created by specifying the number of columns, the inclusion of a header and footer, page size, and page layout.

• Templates can have either a one or two page format. The two page format allows for a larger header or footer on the first page of the log and a more concise header or footer on the second and subsequent pages of the log.

• The location of header and footer titles, columns, and other text can be positioned easily and accurately.

• Horizontal, vertical, and diagonal lines and arrows can be drawn anywhere on a template. The thickness, style and color of the lines can be specified.

• An unlimited number of header and footer titles can be specified for each template, titles are then displayed when entering and displaying log data.

• Headers and footers can contain checkboxes that can be checked when entering log data.

• An unlimited number of columns can be used in each template.

• Columns can be for depth, elevation, lithologic symbol, lithologic description, sample data, well completion details, graphs, geophysical logs, or text.

• An unlimited number of section titles can be specified, each section can include any number of columns.

• Added four new types of columns that can be used in a template. These are text interval, facies, constituents, and members columns. There can be multiple text interval columns. In each of these columns a start depth, end depth, and text comment can be specified. In addition, these columns can be linked so that the start and end depths only need to be entered once for all of the linked columns.

• Font and text color can be specified separately for headers, header titles, footers, footer titles, individual columns, column titles, and section titles.

• Two specially designed fonts are provided with the WinLoG program for use with the new Constituent and Member columns.

• The Company Name can be entered anywhere on the template as rich text.

• An unlimited number of company logos, site plans, or symbols can be imported as bitmaps and placed anywhere on the template.

• An unlimited number of floating paragraph text boxes can be added anywhere to a template. The text is specified in rich text format. The background color and frame color can be specified individually for each text box.

• An unlimited number of lines, arrows, and rectangles can be specified anywhere on the template.

• New multiple symbol columns can be used to show bitmap symbols at various depths from lithologic libraries. These can be used for lab samples, test intervals, fossils, etc. The symbols shown in a symbol column are independent of those specified in the lithology.

Legend Features

• Create a new legend by specifying lithologic symbol libraries, well symbols, and sample type symbols to include.

• Position of libraries and titles can be easily and accurately specified.

• Number of symbols per row can be specified for each library.

• An unlimited number of company logos, site plans, or symbols can be imported as bitmaps and placed anywhere on the legend.

• An unlimited number of floating paragraph text boxes can be added anywhere to a legend.

• An unlimited number of lines, rectangles, and arrows can be added anywhere on the legend.

• Legends can be exported to the clipboard, a bitmap file, or an enhanced metafile.

Library Features

• New libraries can be created by specifying the library name and ID.

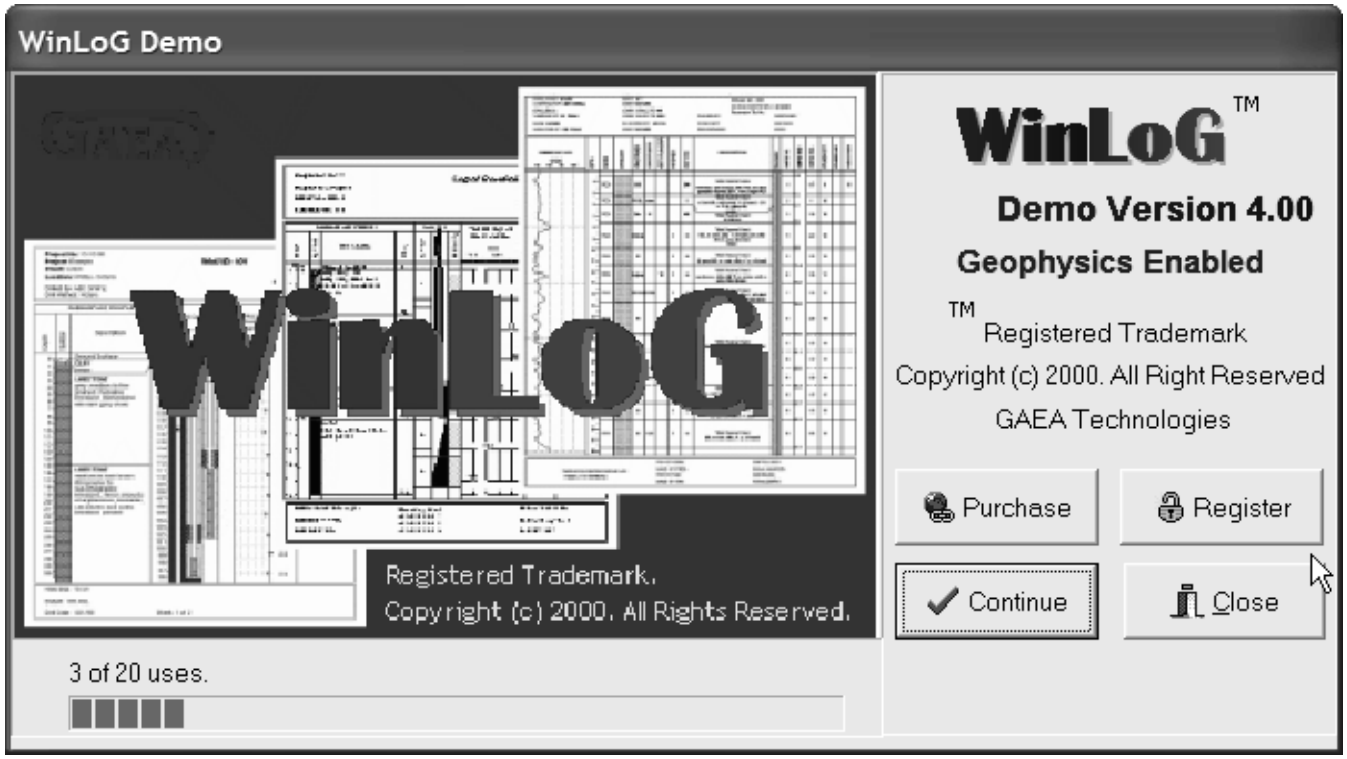
• An unlimited number of libraries can be used.

• Up to 18 symbols per library.

• Default text descriptions for each symbol can be entered.

• Symbols can be edited within the program and imported from bitmap files

1. Getting Started



1. Getting Started

Before you begin working with the WinLoG program you should:

1. Check the contents of your distribution package;
2. Make sure you have the necessary equipment;
3. Run the installation program;
4. Read the README file;
5. Start the WinLoG program.
6. Register the WinLoG program.

The Distribution Package

The WinLoG distribution package you received should include this User's Guide and a CD-ROM.

Required Equipment

WinLoG requires the following hardware and software to run efficiently:

1. Windows 2000/XP or NT;
2. At least 32 MB of RAM;
3. At least 32 MB of hard disk space;
4. A screen resolution of at least 600 x 800 with at least 16 bit color;
5. A CD-ROM drive.

Installation

To get WinLoG up and running, run the installation program SETUP.EXE on the CD-ROM. For example, to install from drive D:

1. Start Windows

2. Insert the CD-ROM into drive D;

3. Choose Start and then Run and type "D:\WinLoG\setup.exe", or double-click on "D:\WinLoG\setup.exe" in Windows Explorer, or double-click on the Add/Remove Programs icon in the Control;

4. Enter the requested information in the installation forms, discussed in the next section.

On some computer systems, depending on how they are configured, inserting the CD-ROM into the drive will automatically start the GAEA menu program. In this case select WinLoG from the menu screen. All of the programs listed on the menu screen can be installed and will run in demo mode until an unlock code is provided.

The SETUP program does the following:

1. Creates one or more directories on your hard disk and copies the contents of the WinLoG disk into them;

2. Creates a Windows application group and installs the WinLoG program and help icons.

A complete list of files that are copied and the directories they are copied to is provided in Appendix C.

Requested Information

The installation dialog boxes will request the directories to store the WinLoG program and databases, and the name of the application group for the WinLoG program icons.

Tip

If you are re-installing or upgrading the program, select Custom Setup. Using Custom Setup you can select not to install the empty databases, this will avoid overwriting your existing databases.

Network Installation

Tip

When installing a second user on a network do not install the databases from the CD. This will overwrite the existing master and main databases on the server.

The following items should be checked before installing WinLoG on a network:

1. Ensure that you have sufficient network rights to the drive on which you will install WinLoG (on Windows NT/XP and 2000 systems you will need to have system administrator privileges);

2. Check to see if you have sufficient disk space available for the program files (at least 32 MB);

3. Verify that the drive letters that you specify during installation are consistent with those that are available on your server;

4. Make sure the total number of WinLoG copies in use does not exceed the number that is licensed. If you need more copies than are currently licensed, contact GAEA to order additional licenses.

Tip

When installing WinLoG on a client PC, specify the directory on the server where the master database is stored as the main database directory.

To install the WinLoG program on a network server follow the installation instructions provided above. After the WinLoG program has been installed the users must be given network access to the WinLoG program directories and databases.

README File

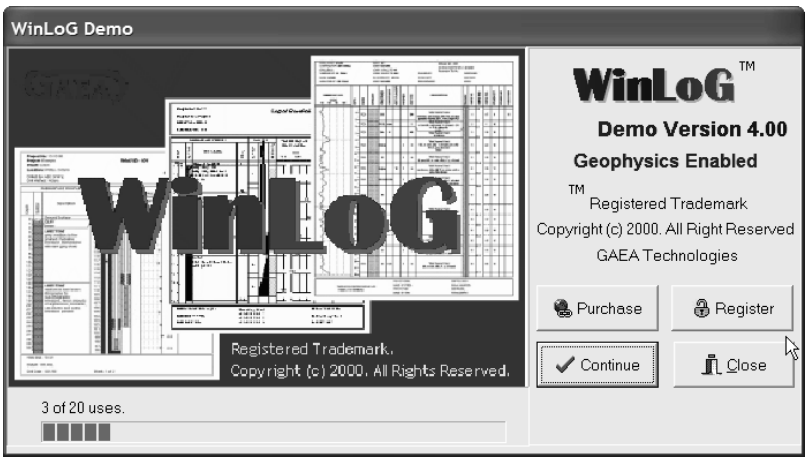
Any last-minute changes, additions or trouble-shooting tips are documented in the README file. When the SETUP program has finished installing the WinLoG program, it will automatically install an icon for the README file in the application group. To view the README file click on this icon.

Uninstalling WinLoG

The WinLoG program files can be removed from your hard disk using the Add/Remove programs option in the Windows Control Panel. Uninstalling the WinLoG program will also remove the WinLoG icons, and application group.

Registering and Unlocking WinLoG

Before WinLoG can be used it must be registered. Prior to registration process the program will run in Demo mode. During the registration the program will be unlocked.



Single User Registration

To register the program and obtain an unlock code, run the WinLoG program. Until the program is unlocked it will operate in Demo mode and the form below will be displayed.

To register the program press the Register button, the Registration form shown on the next page will be displayed. In the middle of this form a unique serial number will be displayed. This serial number is unique for each computer.

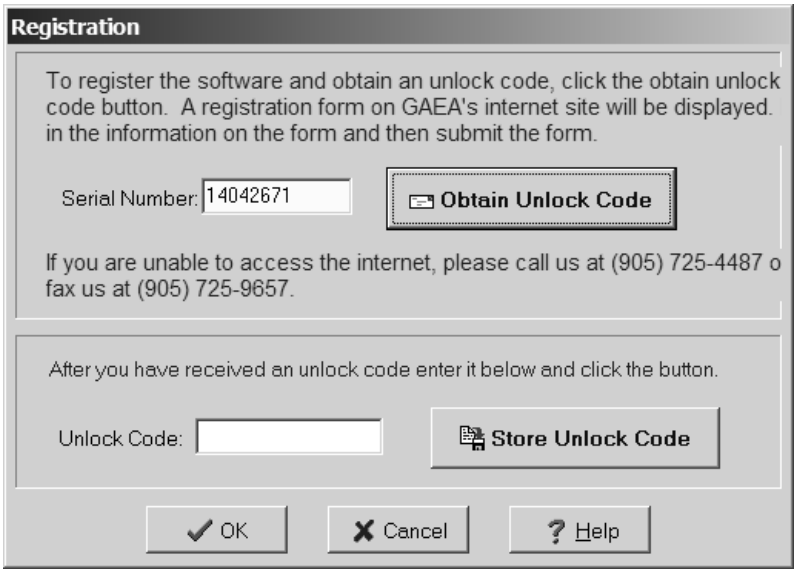
To register the program an unlock code must be obtained using this serial number. If your computer is connected to the Internet, you can obtain this unlock code by clicking on the Obtain Unlock Code button. After the button is pressed a registration form on GAEA's web site will be displayed on your internet browser. Fill out the form and then click on the submit button. After your registration information has been received an unlock code will be emailed to you.

Tip

This form can also be displayed using the Purchase menu item in the Help menu.

Tip

If you have problems emailing us the serial number or need an unlock code faster, call us and we will give it to you over the phone.


Registration
To register the software and obtain an unlock code, click the obtain unlock code button. A registration form on GAEA's internet site will be displayed. in the information on the form and then submit the form.
Serial Number: 14042671
Obtain Unlock Code
If you are unable to access the internet, please call us at (905) 725-4487 o fax us at (905) 725-9657.
After you have received an unlock code enter it below and click the button.
Unlock Code:
Store Unlock Code
OK
Cancel
Help

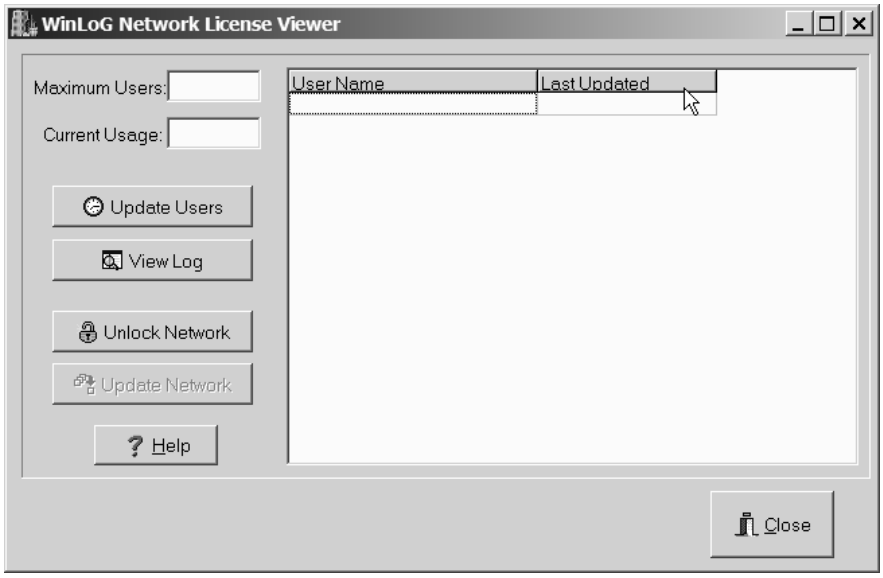
If your computer is not connected to the Internet, you can call or fax us the serial number.

After GAEA has received your unique serial number, an unlock code will be generated and emailed or faxed to you. When you receive the unlock code enter it in the space at the bottom of the Registration form and then press the Store Unlock Code button. The WinLoG program is now registered and the Demo form will no longer be displayed when the program is run.

Network Registration

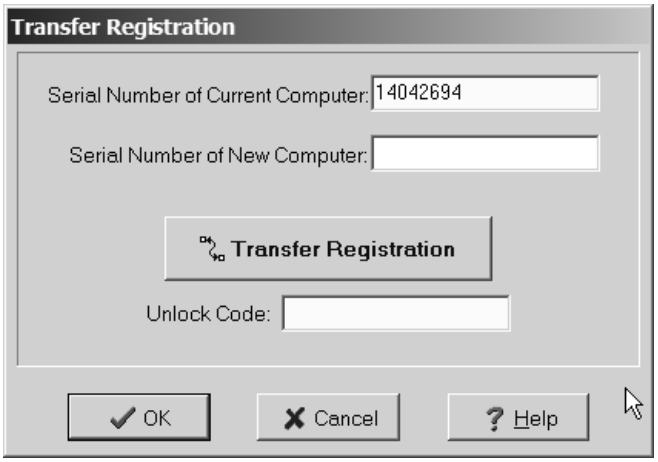
Registering the program for a network with multiple users is a little different than for a single user. The Network Monitor program, shown on the next page, is used to unlock the network and monitor program usage.

To unlock the program, start the Network Monitor program in the WinLoG application group. Click on the Unlock Network button on the Network Monitor form. Then contact GAEA by email or telephone and provide the network serial and user numbers shown on the form. Enter the network and user unlock codes provided by GAEA and then press the Ok button.



Transferring the Registration

After the WinLoG program has been registered, the unlocked program can be transferred to a different computer using the Transfer utility. This utility allows you to move the WinLoG program between computers without requiring assistance from GAEA. After the registration has been transferred the WinLoG program will only run on the new computer.



Tip

The Transfer utility should be used with caution, since if incorrect serial numbers are entered you will lose the registration on both computers. If this happens contact GAEA for a new unlock code. Transferring the registration is a two step process.

Step 1. The first step is to obtain the unique serial number of the new computer. Install and run WinLoG on the new computer. Initially the program will start in Demo mode and the Demo form will be displayed. Press the Register button and write down the unique serial number for the new computer.

Step 2. In the second step the Transfer utility is used to generate an unlock code for the new computer. Start WinLoG on the old PC and select the Transfer menu item from the Help menu. The Transfer Registration form on the previous page will be displayed. Enter the serial number of the new computer and then press the Transfer Registration button. An unlock code for the new computer will be displayed. Enter this unlock code in the Registration form on the new computer, and then press the Store Unlock Code button.

After the Transfer Registration button has been pressed, WinLoG on the old PC will be set to run in demo mode.

Using WinLoG

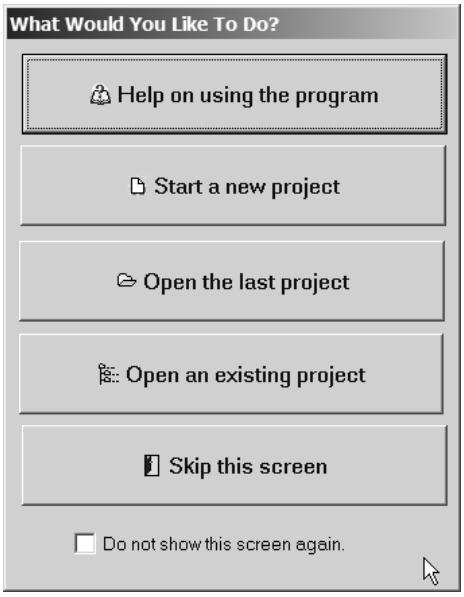
This section explains how to interact with the various parts of the WinLoG program. It discusses how to use the various toolbars and menus.

Starting WinLoG

To begin working with WinLoG after you have installed the program, start it by double-clicking on the WinLoG icon in the WinLoG application group.

When you first start the program a form will be displayed as shown on the next page. After selecting an option and completing any additional forms, the main WinLoG screen will be displayed.

The main window of the WinLoG program consists of a title bar, menu bar, optional toolbars and desktop. In addition, popup menus can be displayed by clicking the right mouse button. This section explains how to interact with the various parts of the WinLoG program.


What Would You Like To Do?
Help on using the program
Start a new project
Open the last project
Open an existing project
Skip this screen
Do not show this screen again.

Menu Bar

The menu bar contains the main level of commands. It uses standard Windows pull-down menus. You can choose any menu item on any submenu that is not dimmed (WinLoG will know when certain menu commands are not available, and prevents you from choosing them). The majority of these commands can also be selected using the speed buttons on the toolbars (see below).

When the program is first started and no borehole or template are opened, the File, Report, View, Window, and Help items will appear on the menu bar. After a borehole or template is opened there will also be an Edit item on the menu bar.

File Menu

This menu contains commands similar to those in other Windows applications and contains the following submenu.

Projects - displays a submenu used to create, open, save, delete, close, and import projects.

Borehole Logs - displays a submenu used to create, open, save, close, and delete borehole logs.

Tip

If you do not want the Startup form displayed every time you start the program, click on the "Do not show this screen again" box at the bottom of the form. This form can be turned back on using program preferences.

Tip

If a menu item contains an underlined letter it can be selected by holding down the Alt key and pressing that letter.

Templates - displays a submenu used to create, open, save, close, and delete templates.

Legends - displays a submenu used to create, open, save, close, and delete legends.

Symbol Libraries - displays a submenu used to create, open, save, close, and delete lithologic symbol libraries.

Lithology Macros - used to create and edit lithology macros.

Well Macros - used to create and edit wellmacros.

Import / Export Data - displays a submenu used to import and export data.

Back Up WinLoG - used to create a back up copy of the WinLoG database/

Pocket PC Data - displays a submenu used to export and import data from Pocket WinLoG.

Print - used to print borehole logs and templates.

Print Setup - used to adjust the printer settings.

Preferences - used to set program preferences.

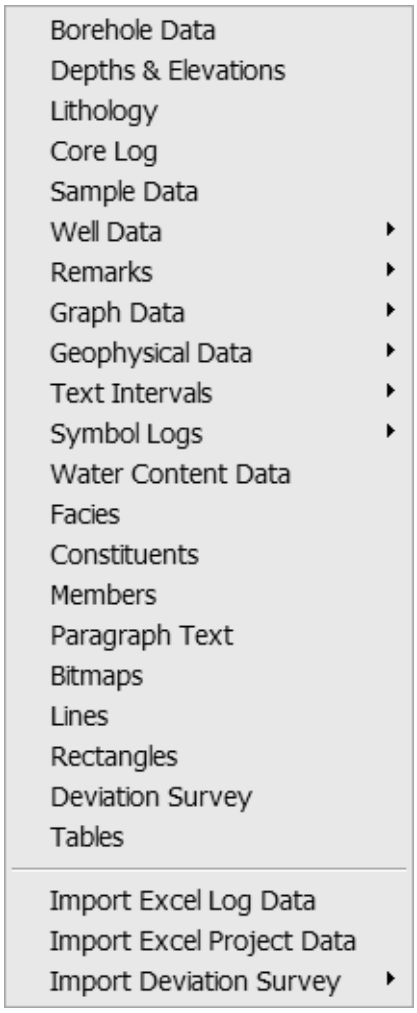
Exit - closes the program.

Edit Menu

After a borehole log, template, legend, or symbol library has been opened the Edit menu will appear on the menu bar. The contents of the Edit menu will vary depending on what is currently displayed on the desktop.

Borehole Logs

If a borehole log is currently displayed on the desktop the edit menu will contain the following commands.



Borehole Data - used to edit the general data for the borehole (headers, footers, borehole number, coordinates, and symbol).

Depths & Elevations - used to edit the depths and elevation.

Lithology - used to edit the lithologic layers.

Sample Data - used to edit the sample data of the borehole log.

Well Data - displays a submenu that can be used to add, delete or edit a well.

Remarks - displays a submenu that can be used to add, delete or edit a remark column.

Graph Data - displays a submenu that can be used to add, delete or edit a graph column.

Geophysical Data - displays a submenu that can be used to add, delete or edit the geophysical data .

Text Intervals - displays a submenu that can be used to add, edit and delete text interval data.

Symbol Logs - displays a submenu that can be used to add, edit or delete symbol log data.

Water Content Data - used to edit the water content data.

Facies - used to edit facies data.

Constituents - used to edit constituent data.

Members - used to edit members data.

Paragraph Text - used to add, edit, and delete paragraph text.

Bitmaps - used to add, edit, and delete bitmaps.

Lines - used to add, edit, and delete lines and arrows.

Rectangles - used to add, edit, and delete rectangles.

Deviation Survey - used to edit deviation survey data.

Tables - used to add, edit and delete table data.

Import Excel Log Data - used to import data for the borehole from Excel.

Import Excel Project Data - used to import data for several boreholes in the project from Excel.

Import Deviation Survey - displays a submenu used to import deviation survey data for the log.

Templates

If a template is currently displayed on the desktop the edit menu will contain the following commands.

Headers - used to edit the headers.

Footers - used to edit the footers.

Columns - used to edit the columns.

Company - used to edit the company name.

Paragraph Text - used to add, edit, and delete paragraph text.

Bitmaps - used to add, edit, and delete bitmaps.

Lines - used to add, edit, and delete lines and arrows.

Rectangles - used to add, edit, and delete rectangles.

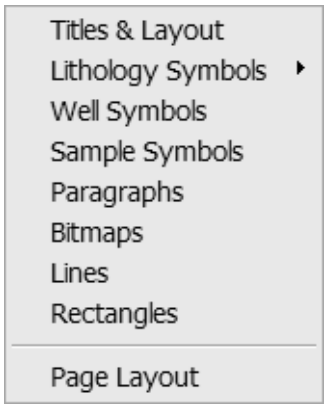
Tables - used to add, edit, and delete tables.

Page Setup - used to change the size and orientation of the page.

# of Pages - displays a submenu that is used to select whether the template has one or two pages.

Legends

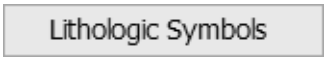
If a legend is currently displayed on the desktop the edit menu will contain the following commands.



Titles & Layout - used to edit the titles and layout of the legend.
Lithologic Symbols - used to edit the lithologic symbols of the legend.
Well Symbols - used to edit the well symbols of the legend.
Sample Symbols - used to edit the sample symbols of the legend.
Paragraph Text - used to edit paragraph text in the borehole log.
Bitmaps - used to edit bitmaps in the borehole log.
Lines - used to edit lines in the borehole log.
Rectangles - used to edit rectangles in the borehole log.
Page Layout - used to edit the layout of the page.

Symbol Libraries

If a lithologic symbol library is currently displayed on the desktop the edit menu will contain the following commands.



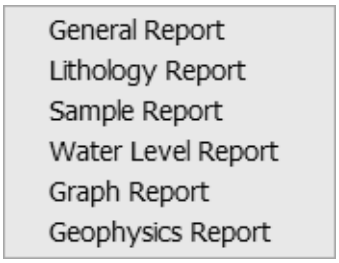
Lithologic Symbols - used to edit the descriptions and symbols in the library.

Tip

Standard popup menus containing the cut, copy, and paste commands are available when entering data.

Report Menu

This menu contains commands for displays various reports for the project. The menu will not appear if there is no project open.



General Report - displays a general report for the project.

Lithology Report - displays a report on the lithologies in the project.

Sample Report - displays a report on the sample data in the project.

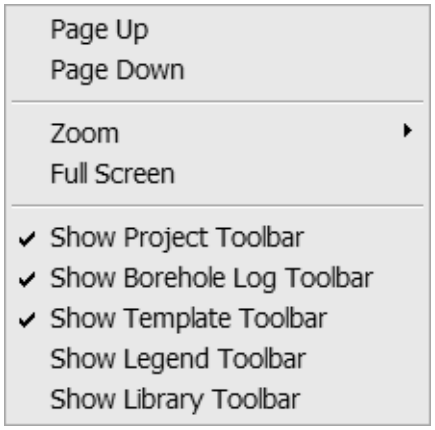
Water Level Report - displays a report on the water levels in the project.

Graph Report - displays a report on the graph data in the project.

Geophysics Report - displays a report on the geophysical data in the project.

View Menu

This menu contains commands for adjusting the view and toggling toolbars on and off.



Page Up - scrolls the desktop up one page (the desktop can also be scrolled up or down by using the vertical scrollbar on the right side of the desktop).
Page Down - scrolls the desktop down one page.
Zoom - displays a submenu that can be used to select a zoom factor between 25 and 200 percent.
Full Screen - displays the desktop in full screen mode (zoom factor equal to 100 percent).
Show Project Toolbar - if checked the Project Toolbar will be displayed.

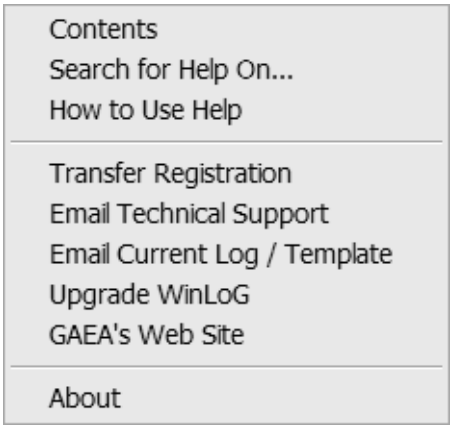
Show Borehole Log Toolbar - if checked the Borehole Log Toolbar will be displayed.
Show Template Toolbar - if checked the Template Toolbar will be displayed.
Show Legend Toolbar - if checked the Legend Toolbar will be displayed.
Show Library Toolbar - if checked the Library Toolbar will be displayed.

Window Menu

This menu contains the standard Windows commands for selecting and arranging windows on the desktop.

Help Menu

This menu contains the following commands:



Contents - displays the contents of the online help.
Search for Help On... - displays help on a specified topic.
How to Use Help - shows how to use the online help.
Transfer Registration - used to transfer the registration from one computer to another.
Email Technical Support - used to send an email to technical support.
Email Current Log / Template - used to email the currently displayed log and template to technical support.
Upgrade WinLoG - used to download and install the latest upgrade from the Internet.
GAEA's Web Site - used to display GAEA's web site in the default Internet browser.
About - used to display version information about the program.

Tip

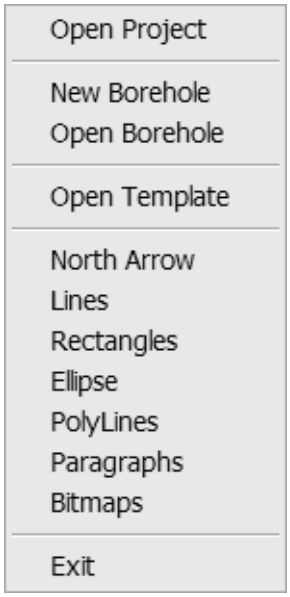
The exact version number of the program can be obtained by selecting the Help and About command. This version number should be reported when obtaining technical support.

Popup Menus

Popup menus can be displayed at any time by pressing the right mouse button. The menu that will be displayed depends upon what is currently displayed on the desktop.

Project Popup Menu

If the location map for a project is displayed the Project Popup Menu will be displayed. This menu contains the following menu items:



Open Project - used to open an existing project.

New Borehole - creates a new borehole.

Open Borehole - opens an existing borehole.

Open Template - opens an existing template.

North Arrow - used to add, edit or delete the north arrow.

Lines - used to add, edit or delete lines.

Rectangles - used to add, edit or delete rectangles.

Ellipse - used to add, edit or delete ellipses.

PolyLines - used to add, edit or delete polylines.

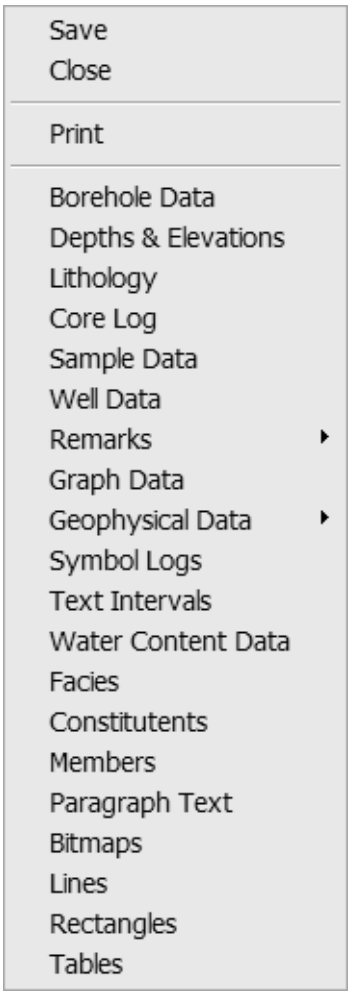
Paragraphs - used to add, edit or delete paragraphs.

Bitmaps - used to add, edit or delete bitmaps.

Exit - exits the WinLoG program.

Borehole Log Popup Menu

If a borehole log is currently displayed on the desktop the Borehole Log Popup Menu will be displayed This popup menu contains the following commands.

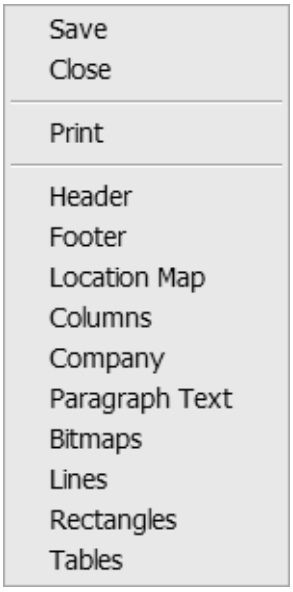


Save - saves the borehole log.
Close - closes the borehole log.
Print - prints the borehole log.
Borehole Data - used to edit the general data for the borehole (headers, footers, borehole number, coordinates, and symbol).
Depths & Elevations - used to edit the depths and elevation.
Lithology - used to edit the lithologic layers.
Core Log - used to edit the core log data.
Sample Data - used to edit the sample data.
Well Data - displays a submenu that can be used to add, delete or edit a well.
Remarks - displays a submenu that can be used to add, delete or edit a remark column.
Graph Data - displays a submenu that can be used to add, delete or edit a graph data.
Geophysical Data - displays a submenu that can be used to add, delete or edit the geophysical data.
Symbol Logs - displays a submenu that can be used to add, edit, or delete symbol log data.
Text Intervals - displays a submenu that can be used to add, edit, or delete text interval data.
Water Content Data - used to edit the water content data.
Facies - used to edit facies data.
Constituents - used to edit constituents data.

Members - used to edit members data.
Paragraph Text - used to edit paragraph text.
Bitmaps - used to edit bitmaps.
Lines - used to edit lines.
Rectangles - used to edit rectangles.
Tables - used to edit table data.

Template Popup Menu

If a template is currently displayed on the desktop the Template Popup Menu will be displayed This popup menu contains the following commands.



Save - saves the template in the database.

Close - closes the template.

Print - prints the template.

Header - used to edit the headers.

Footer - used to edit the footers.

Location Map - used to add, edit or delete a location map on the template.

Columns - used to edit the columns.

Company - used to edit the company name.

Paragraph Text - used to add, edit, and delete paragraph text.

Bitmaps - used to add, edit, and delete bitmaps.

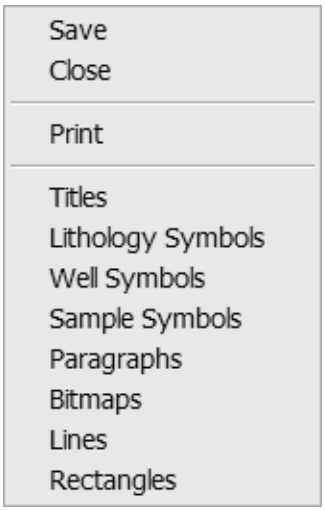
Lines - used to add, edit, and delete lines and arrows.

Rectangles - used to add, edit, and delete rectangles.

Tables - used to add, edit and delete tables.

Legend Popup Menu

If a legend is currently displayed on the desktop the Legend Popup Menu will be displayed This popup menu contains the following commands.



Save - saves the symbol library.

Close - closes the symbol library.

Print - prints the symbol library.

Titles - used to edit the titles of the legend.

Lithologic Symbols - used to edit the lithologic symbols.

Well Symbols - used to edit the well symbols.

Sample Symbols - used to edit the sample symbols.

Paragraph Text - used to edit paragraph text.

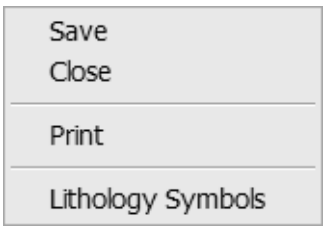
Bitmaps - used to edit bitmaps.

Lines - used to edit lines.

Rectangles - used to edit rectangles.

Symbol Library Popup Menu

If a symbol library is currently displayed on the desktop the Symbol Library Popup Menu will be displayed This popup menu contains the following commands.



Save - saves the symbol library.

Close - closes the symbol library.

Print - prints the symbol library.

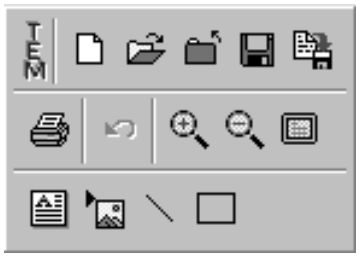
Lithologic Symbols - used to edit the lithologic symbols.

Toolbars

There are five toolbars that can be displayed on the desktop; they are the Project Toolbar, Borehole Log Toolbar, Template Toolbar, Legend Toolbar and Symbol Library Toolbar. The display of the toolbars is controlled in the View menu.

These toolbars can either float over top of the desktop or be docked to the top side or left side of the desktop.

To make the toolbar float click and hole down the left mouse button on the edge of the toolbar. Then drag the mouse to where you want the toolbar and release the button. The number of rows in the floating toolbar can be adjusted by changing the size of the toolbar with the mouse.



The toolbars can also be collapsed and expanded by clicking on the 3-letter toolbar name at the beginning of each toolbar.

Each toolbar contains several speed buttons that can be used to perform the same tasks as the menu bar at the top of the desktop. These speed buttons are described below.

Project Toolbar

The Project Toolbar is used to create, open, and close projects. Each of the speed buttons on the toolbar is explained below.

The **New** button is used to create a new project.

The **Open** button is used to open an existing project.

The **Close** button is used to close an open project (this button will be dimmed if no project is currently opened).

The **Print** button is used to print the sieve analysis or template (this button will be dimmed if no project is currently opened).

The **Help** button is used to display help on using the program.

The **Exit** button is used to exit the program.

Borehole Log Toolbar

The Borehole Log Toolbar is used to create and edit borehole logs. Each of the speed buttons on the toolbar is explained below.

The **New** button is used to create a new borehole log.

The **Open** button is used to open an existing borehole log.

The speed buttons below will be dimmed if no borehole log is currently opened.

The **Close** button is used to close a borehole log.

The **Save** button is used to save changes to the borehole log.

The **SaveAs** button is used to save the borehole log under a different name.

The **Print** button is used to print the borehole log.

The **Undo** button is used to undo changes to the borehole log.

The **Zoom-in** button is used to expand the borehole log by a factor of 25% (this button will be dimmed if the cross-section is already zoomed to a factor of 200%).

The **Zoom-out** button is used to shrink the borehole log by a factor of 25% (this button will be dimmed if the cross-section is already zoomed to a factor of 25%).

The **Full-Screen** button is used to reset the zoom factor to full screen.

The **Copy** button is used to make a copy of the borehole log.

The **Change Template** button is used to change the template that is used to format the borehole log.

The **Up** button is used to scroll the borehole log up one page.

The **Down** button is used to scroll the borehole log down one page.

The **Table** button is used to add a table to the log.

The **Paragraph Text** button is used to add paragraph text to the cross-section.

The **Bitmap** button is used to add a bitmap to the cross-section.

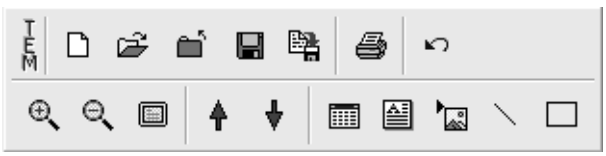
The **Line** button is used to draw lines and arrows on the cross-section.

The **Rectangle** button is used to draw rectangles on the cross-section.

The **Deviation** button is used to toggle between true and measured depths for the log.

Template Toolbar

The Template Toolbar is displayed below and is used to edit templates. Each of the speed buttons on the toolbar is explained below.



The **New** button is used to create a new template.

The **Open** button is used to open an existing template.

The speed buttons below will be dimmed if no template is currently opened.

The **Close** button is used to close a template.

The **Save** button is used to save changes to the template.

The **SaveAs** button is used to save the template under a different name.

The **Print** button is used to print the template.

The **Undo** button is used to undo changes to the template.

The **Zoom-in** button is used to expand the template by a factor of 25% (this button will be dimmed if the template is already zoomed to a factor of 200%).

The **Zoom-out** button is used to shrink the template by a factor of 25% (this button will be dimmed if the template is already zoomed to a factor of 25%).

The **Full-Screen** button is used to reset the zoom factor to full screen (100%).

The **Up** button is used to scroll the borehole log up one page.

The **Down** button is used to scroll the borehole log down one page.

The **Table** button is used to add a table to the log.

The **Paragraph Text** button is used to add paragraph text to the template.

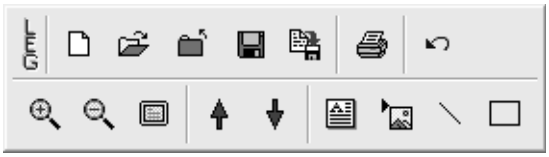
The **Bitmap** button is used to add a bitmap to the template.

The **Line** button is used to draw lines and arrows on the template.

The **Rectangle** button is used to draw rectangles on the template.

Legend Toolbar

The Legend Toolbar is displayed below and is used to edit legends. Each of the speed buttons on the toolbar is explained below.



The **New** button is used to create a new legend.

The **Open** button is used to open an existing legend.

The speed buttons below will be dimmed if no legend is currently opened.

The **Close** button is used to close a legend.

The **Save** button is used to save changes to the legend.

The **SaveAs** button is used to save the legend under a different name.

The **Print** button is used to print the legend.

The **Undo** button is used to undo changes to the legend.

The **Zoom-in** button is used to expand the legend by a factor of 25% (this button will be dimmed if the legend is already zoomed to a factor of 200%).

The **Zoom-out** button is used to shrink the legend by a factor of 25% (this button will be dimmed if the legend is already zoomed to a factor of 25%).

The **Full-Screen** button is used to reset the zoom factor to full screen (100%).

The **Paragraph Text** button is used to add paragraph text to the legend.

The **Bitmap** button is used to add a bitmap to the legend.

The **Line** button is used to draw lines and arrows on the legend.

The **Rectangle** button is used to draw rectangles on the legend.

Symbol Library Toolbar

The Symbol Library Toolbar is displayed below and is used to edit symbol libraries. Each of the speed buttons on the toolbar is explained below.

The **New** button is used to create a new symbol library.

The **Open** button is used to open an existing symbol library.

The speed buttons below will be dimmed if no symbol library is currently opened.

The **Close** button is used to close a symbol library.

The **Save** button is used to save changes to the symbol library.

The **Print** button is used to print the symbol library.

Desktop

The desktop is used to display numerous child windows. These child windows can contain cross-sections, templates, and symbol libraries. The data is displayed graphically and you can add new data or edit existing data by clicking on the data in the window.

Each child window has the standard Windows icons for minimizing, maximizing, and closing the window. When a child window is minimized an icon for the window will be displayed at the bottom of the desktop. The display of the child windows can also be adjusted using the Window command on the menu bar.

Status Line

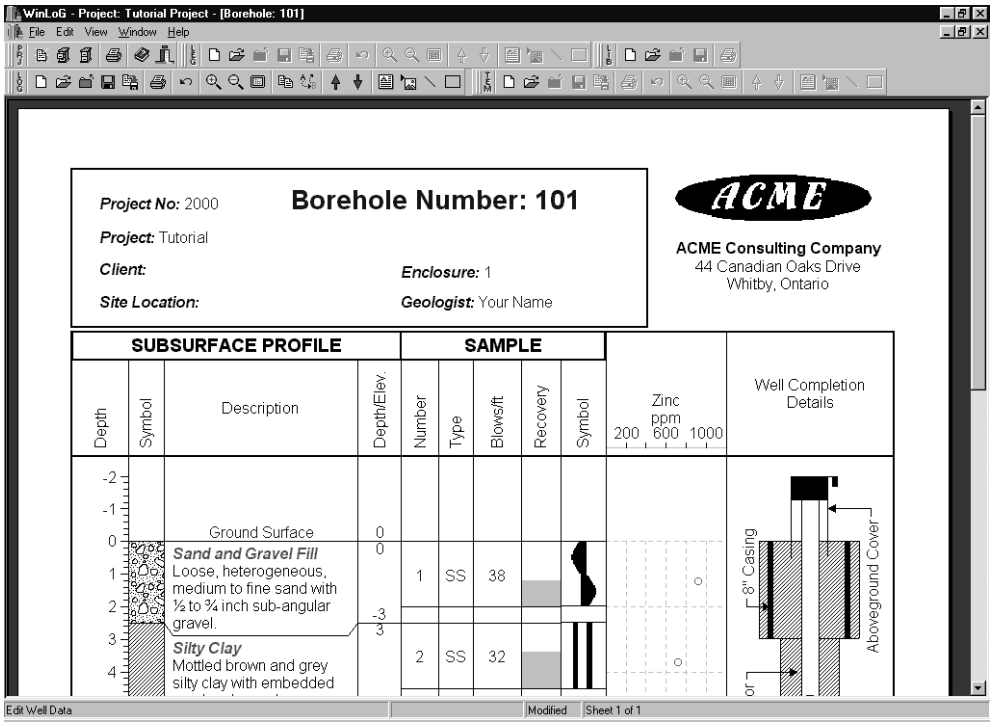
The status line displayed at the bottom of the screen is used to provide information about the current state of the program. It is divided into four fields to display the following information:

• The first and largest field provides periodic information about the data being edited or additional information on the current command or menu item.

• The next field displays the status of the current file, whether it has been saved or modified.

• The next field displays the sheet number of the borehole log being currently displayed.

2. Tutorial


WinLoG - Project: Tutorial Project - [Borehole: 101]
File Edit View Window Help
Project No: 2000
Borehole Number: 101
Project: Tutorial
Client:
Enclosure: 1
Site Location:
Geologist: Your Name
ACME
ACME Consulting Company
44 Canadian Oaks Drive
Whitby, Ontario
SUBSURFACE PROFILE
SAMPLE
Depth
Symbol
Description
Depth/Elev.
Number
Type
Blows/ft
Recovery
Symbol
Zinc ppm
200 600 1000
Well Completion Details
Ground Surface
0
Sand and Gravel Fill
Loose, heterogeneous, medium to fine sand with ½ to ¾ inch sub-angular gravel.
1 SS 38
-3
3
Silty Clay
Mottled brown and grey silty clay with embedded
2 SS 32
8" Casing
Aboveground Cover
Edit Well Data
Modified
Sheet 1 of 1

Tutorial 2.

Before using the WinLoG program, it is recommended that the tutorial in this chapter be completed. This tutorial will give you a basic understanding of how to use the WinLoG program. It describes how to customize a template, create a project, and enter a borehole log. It can be used to gain a quick idea of how to use the WinLoG program for your own projects.

The tutorial first describes how to create a customized template that will be used later to create the borehole log. The following topics are discussed:

1. Selecting a template to be customized
2. Changing header titles
3. Changing the company name
4. Adding a company logo
5. Customizing the depth column
6. Customizing the graph column
7. Deleting a column
8. Customizing the well column

After the template has been customized, the tutorial describes how to:

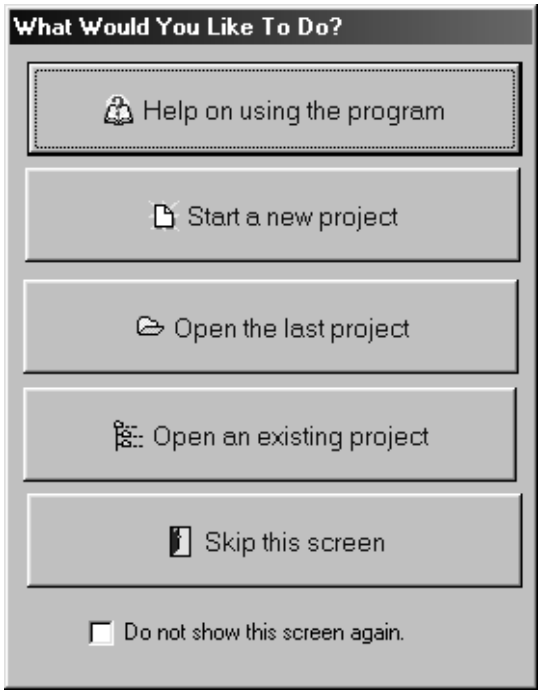
1. Create a new project
2. Create a new borehole log
3. Add borehole information
4. Save the borehole log
5. Print the borehole log
6. Copy the borehole log

It is recommended that while you read this tutorial, you perform the actual procedures discussed using the WinLoG program. The program is supplied with the template "Tutorial", referred to in this chapter.

The purpose of this tutorial is to provide you with a quick understanding of how to use the program. For detailed information on projects, borehole logs, and templates, see Chapters 3, 4, and 5.

Customizing a Template

When the program is first started, the Startup form shown below will be displayed. Since templates do not belong to any one project, we do not need to open a project to customize a template. Select the Skip this Screen button on the form so that we can proceed to selecting a template to customize.


What Would You Like To Do?
Help on using the program
Start a new project
Open the last project
Open an existing project
Skip this screen
Do not show this screen again.

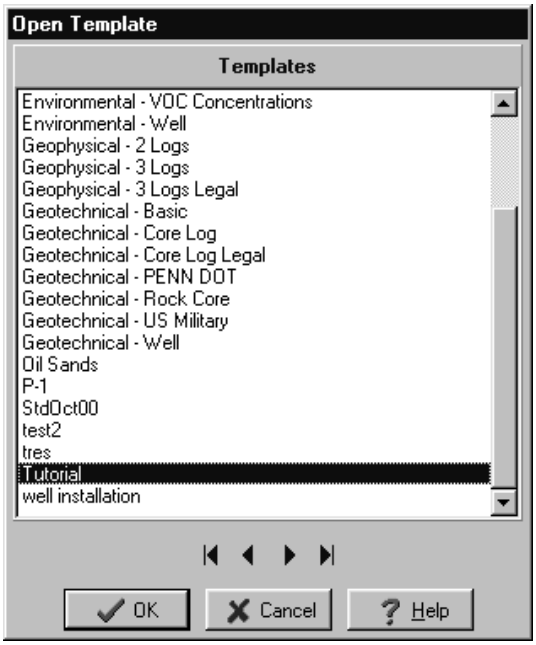
To make it easier to customize the template, the Template toolbar should be turned on if it is not currently displayed. If the Show Template Toolbar option in the View menu is not checked, click on the option to display the toolbar.

If the Template toolbar is displayed in collapsed mode as shown below, then click on the "TEM" to expand the toolbar.

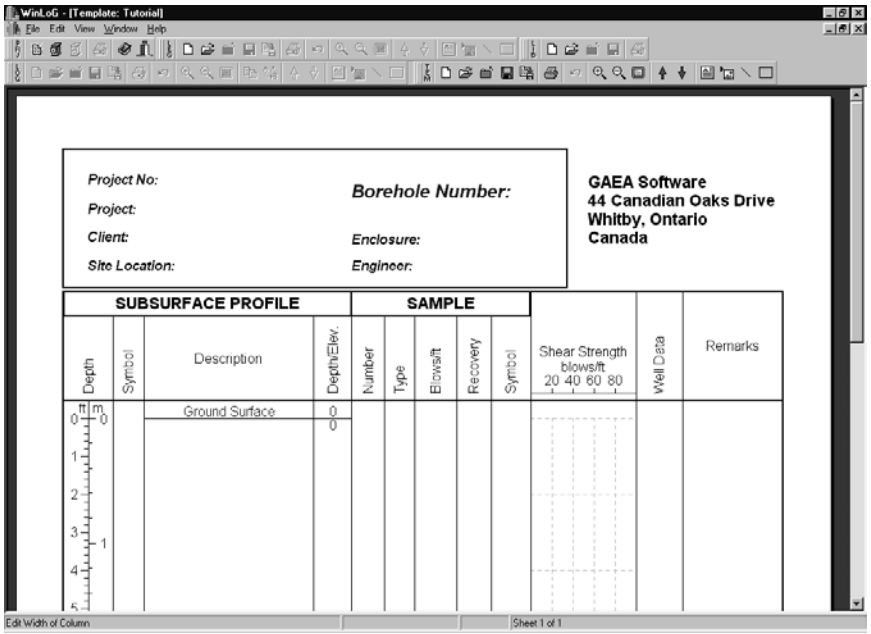
Click to expand to

Selecting a Template

To select a template to customize, press the Open template button on the Template toolbar. The Open Template form below will be displayed. Select the Tutorial template and then press the Ok button.



The tutorial template shown below should then be displayed.



Changing Header Titles

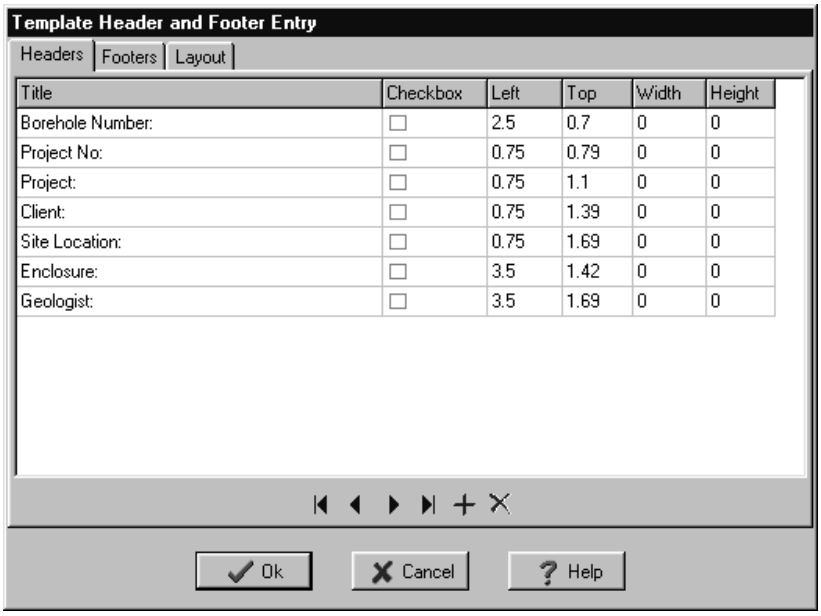
The header of the template is the information block at the top of the borehole log. The position, size, number of header lines, and line titles can all be customized. In this tutorial, we will change a title of a header line and the location of the first title (the borehole number).

To edit the header, click inside the header block with the left mouse button. The Template Header and Footer Entry form on the next page will be displayed.

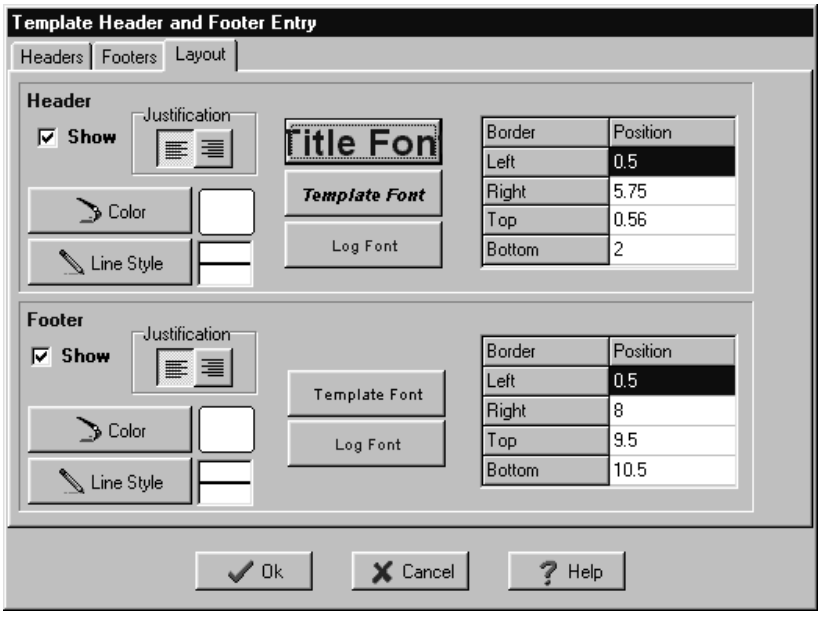
Select the "Engineer" title and enter the new title "Geologist". Next, change the position of the Borehole Number by specifying a Left value of 2.5 and a Top value of 0.7.

Tip

The location of the title could also have been changed by placing the cursor over the title and pressing the left mouse button. Then while holding down the button dragging the title to the new location.

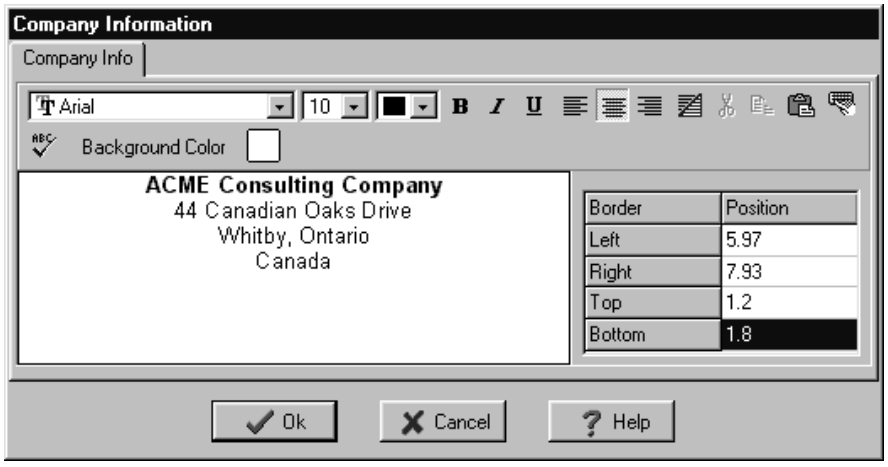


Next change the font of the "Borehole Number" title by clicking on the Layout tab shown below. Press the Title Font button to change the font for the "Borehole Number". In the Font form change the font style to "Bold" and the font size to "18". Press the Ok button on the Font form and the Template Header and Footer Entry form.



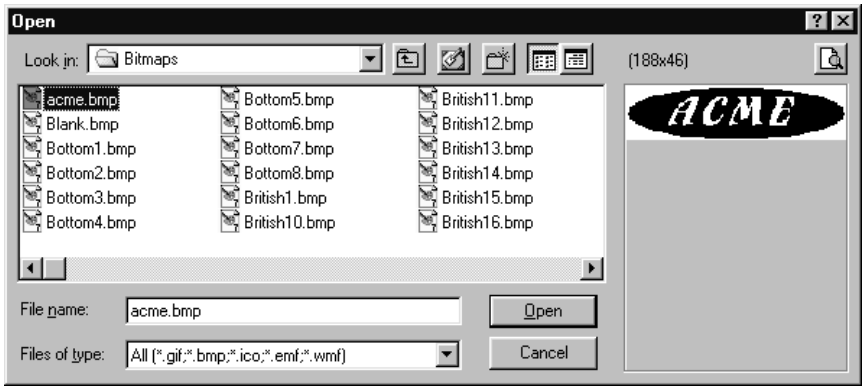
Changing the Company Name

The company name displayed at the top of the log can be changed to show your company name. Click on the company name with the left mouse button. The Company Information form shown below will be displayed. Enter your company name and adjust the Top to "1.2" and the bottom to "1.8". Then press the OK button.

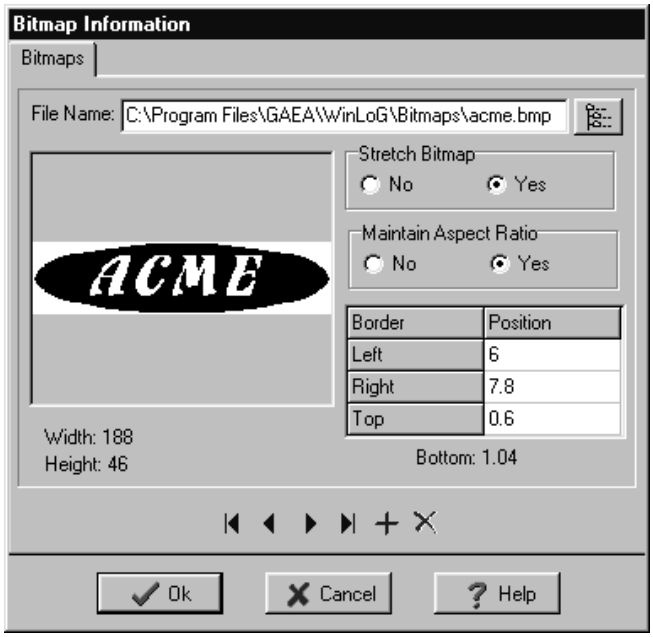


Adding a Company Logo

A popular way to customize a template is to add yours or your client's company logo. To add a company logo, click Bitmap button on the Template toolbar. Click on the location where you want to place the center of the logo, in this example lets put it above the company name. After the mouse is clicked on the location to place the logo, the Open bitmap form on the next page will be displayed. Select the "ACME.BMP" file or your own company logo, then press the open button.



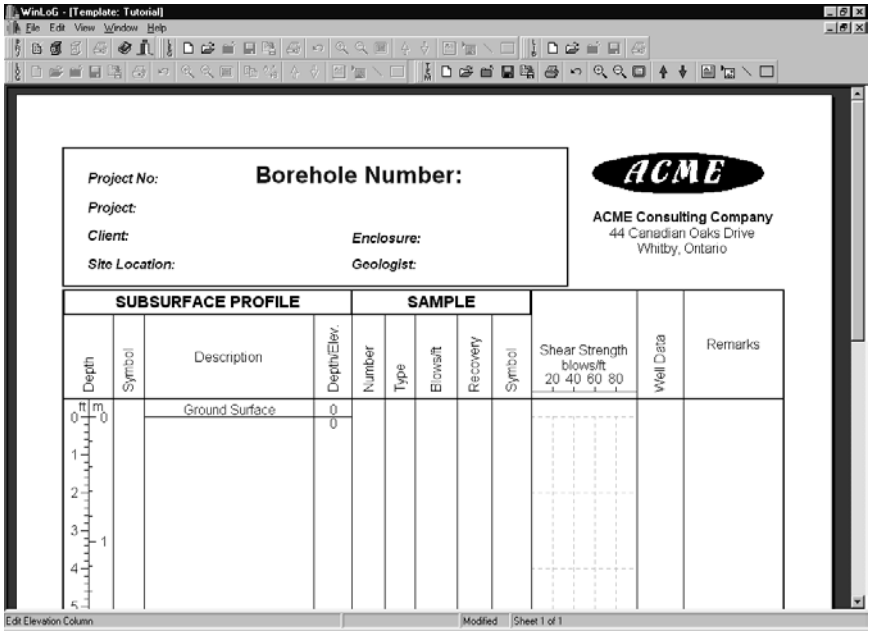
The Bitmap Information form will then be displayed. Set the Stretch Bitmap option to "Yes". Adjust the Left border to "6", the Right border to "7.8", and the Top border to "0.6".



After the Ok button is pressed, the template will appear as shown on the next page.

Tip

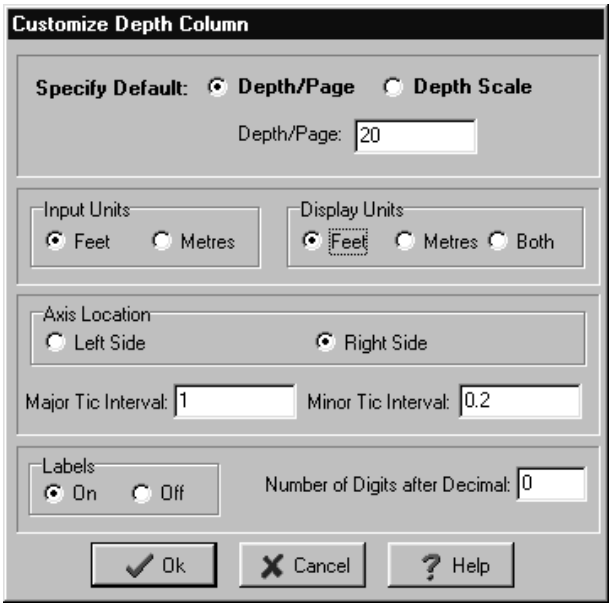
WinLoG requires logos (pictures) to be in Windows bitmap format. Many common graphics programs can convert to this format.



Customizing the Depth Column

The depth column can be customized to change the depth per page and type of depth axis. To customize the depth column, click on the depth column with the left mouse button. The Columns form will be displayed and the current column will be the depth column. Click on the Customize Column button to display the Customize Depth Column form on the next page.

For this tutorial, change the Default Plot Depth/Page to "20" and the Display Units to "Feet". Click on the Ok buttons on the Customize Depth Column and Columns forms, to display the modified template.

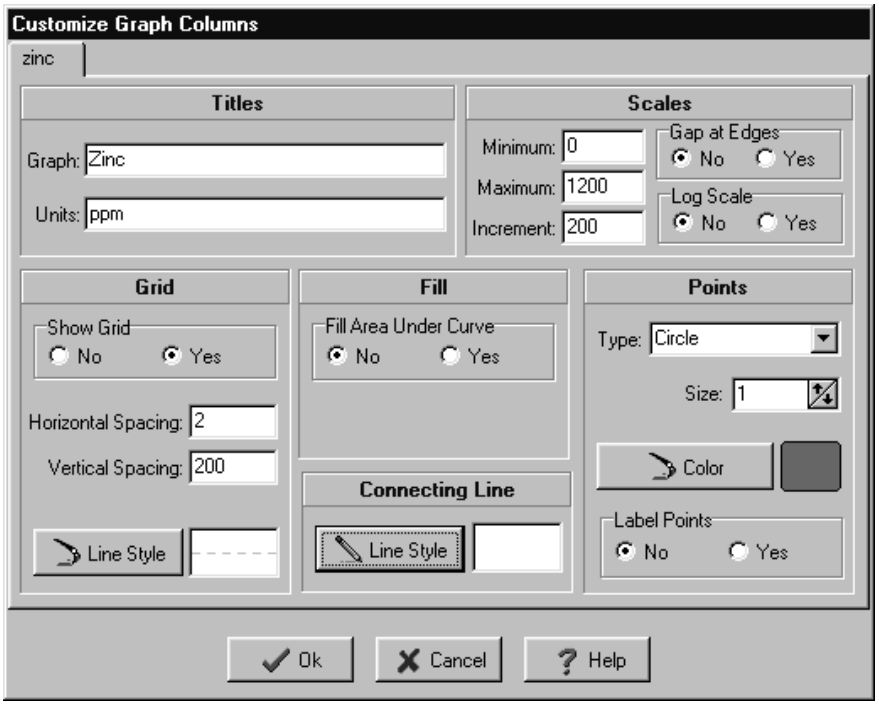


Customizing the Graph Column

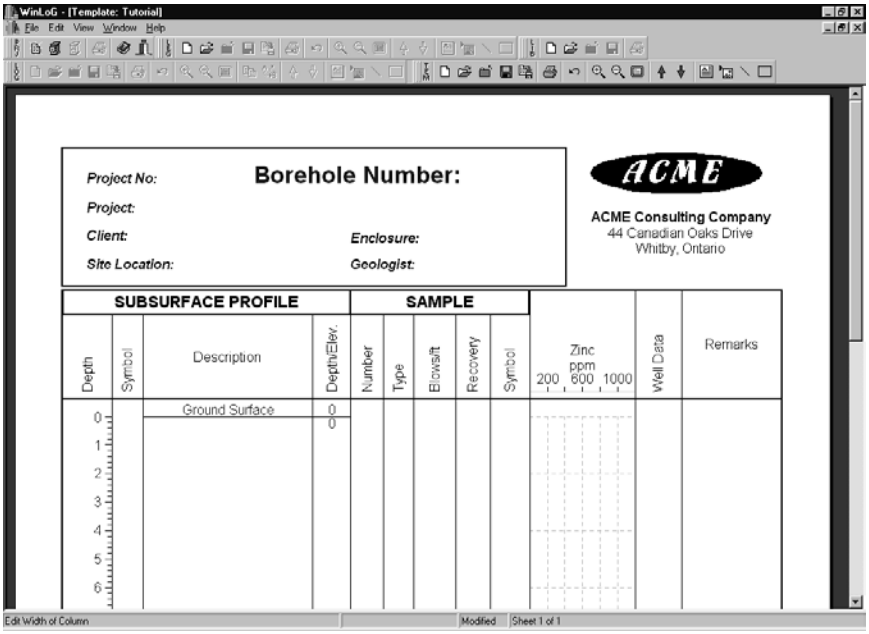
Graph columns can be used to display a variety of data. In this tutorial, we are going to change the graph column, so that it will display concentrations of zinc (obtained from lab analysis of samples). To change the graph column, click on the column with the left mouse button. The Columns form will be displayed. Change the Name of the column to "zinc". Next, press the Customize Column button to modify the graph display. The Customize Graph Columns form below will be displayed.

Change the following parameters:

Graph Title: Zinc
Units: ppm
Maximum: 1200
Vertical Spacing: 200
Connecting Line Style: none (press the Line Style button and select "none" for the line style)

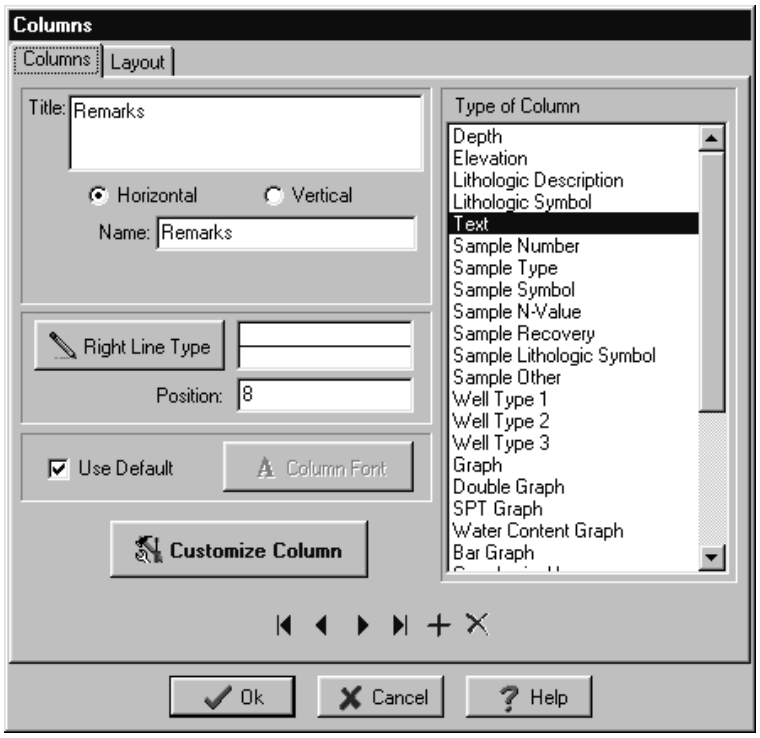


Press the Ok buttons on the Customize Graph Column and Columns form. The template will now appear as shown below.



Deleting a Column

Columns can be easily added and deleted in a template. As part of this tutorial, we are going to delete the Remarks column to make room for a wider Well Data column. To delete the Remarks column, click on the column with the left mouse button. The Columns form below will be displayed. Click on the Delete button at the bottom of the form to delete the column. After the Ok button is pressed, the modified template without the Remarks column will be displayed.



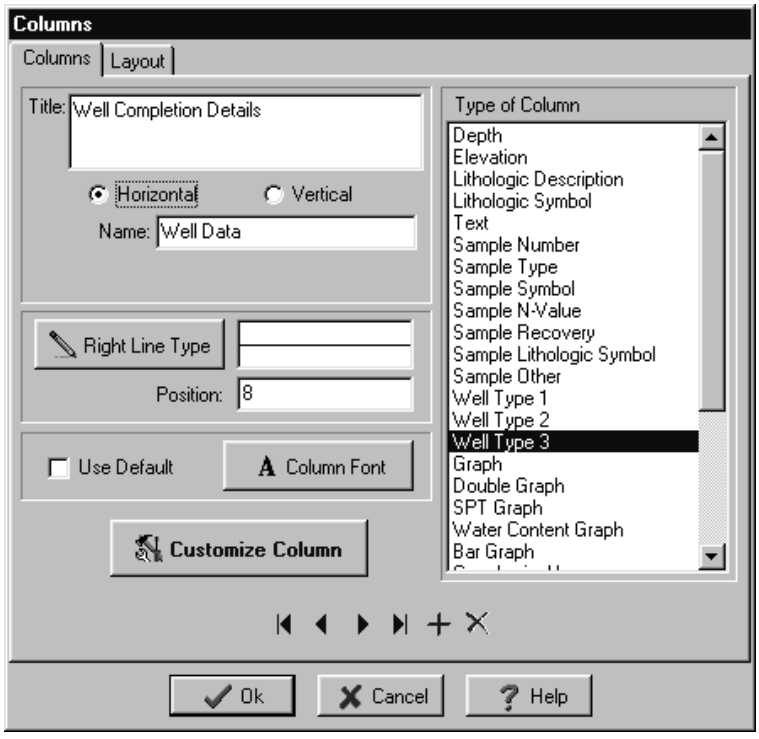
Customizing the Well Column

Now that there is more room for the Well Column, we can make the column wider and change the title. To modify the Well Column click on the column with the left mouse button. When clicking on the column make sure you click the mouse on the left side of the column, since the column does not extend to the right edge of the template yet.

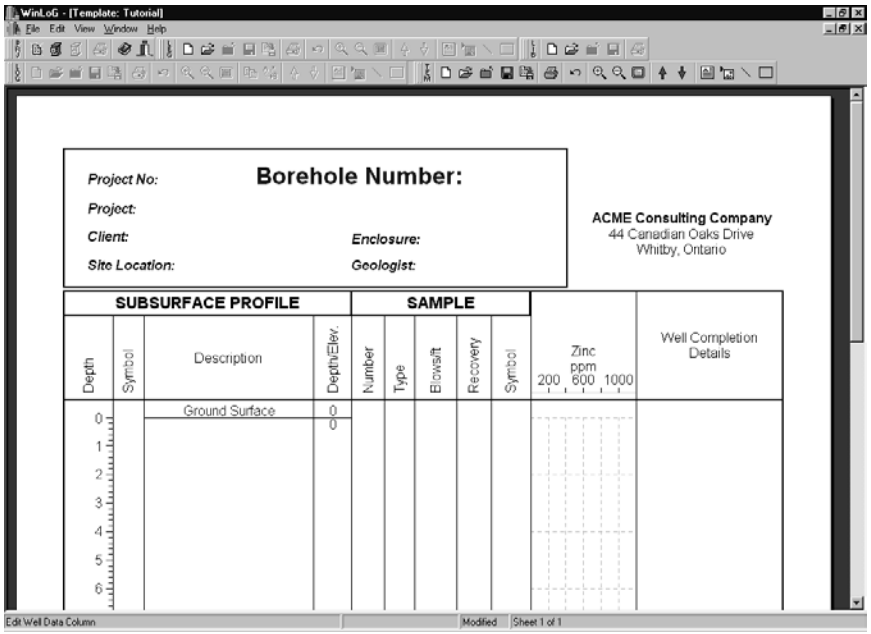
In the Columns form shown below, change the following parameters:

Title: Well Completion Details
Orientation: Horizontal
Right Line Position: 8

By changing the right line position to 8, the well column will now extend to the right side of the template.



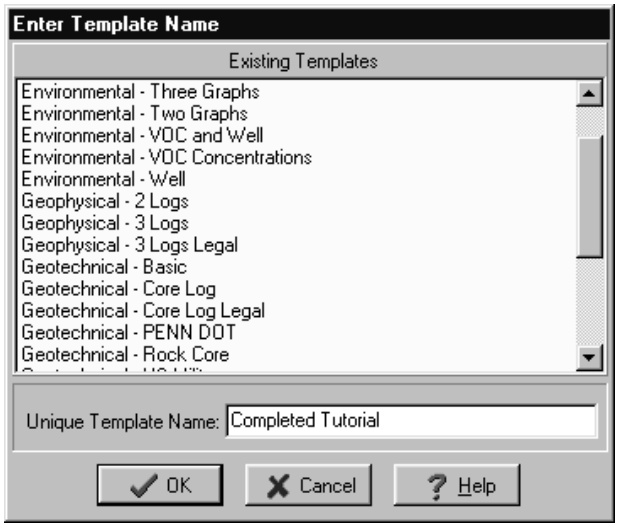
After the above parameters are changed and the Ok button is pressed, the modified template will appear as shown below.



Saving the Template

After the modifications discussed above have been completed, the customized template should be saved. This modified template will be used for creating a borehole log in the sections below.

We are going to save the modified template under a new name so that the tutorial template can be used again if required. To save the template under a new name, click on the SaveAs button on the Template toolbar. In the Enter Template Name form shown on the next page, enter the new template name as "Completed Tutorial". When the Ok button is pressed, the template will be saved and ready for use in the next section.



Closing the Template

This part of the tutorial is now completed and the template can be closed. To close the template, click on the Close button on the Template toolbar.

Creating a Borehole Log

After the template has been customized as described above, it can be used to create a new borehole log. In this tutorial we are going to create a new project for the borehole log, create the borehole log, and then add the borehole data. The borehole data will consist of general borehole data, lithology data, sample data, graph data, and well completion details.

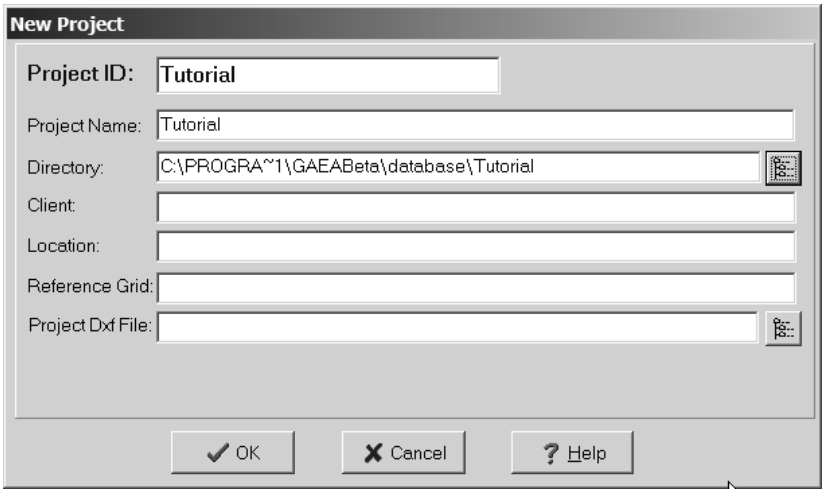
New

Projects are now displayed using a graphical information system. The GIS displays a project location map that can be used to display and edit boreholes and cross-sections (if WinFence has been purchased). In addition, site features and AutoCAD files can also be displayed. The project location map can also be printed to be included with the boring logs.

Creating a New Project

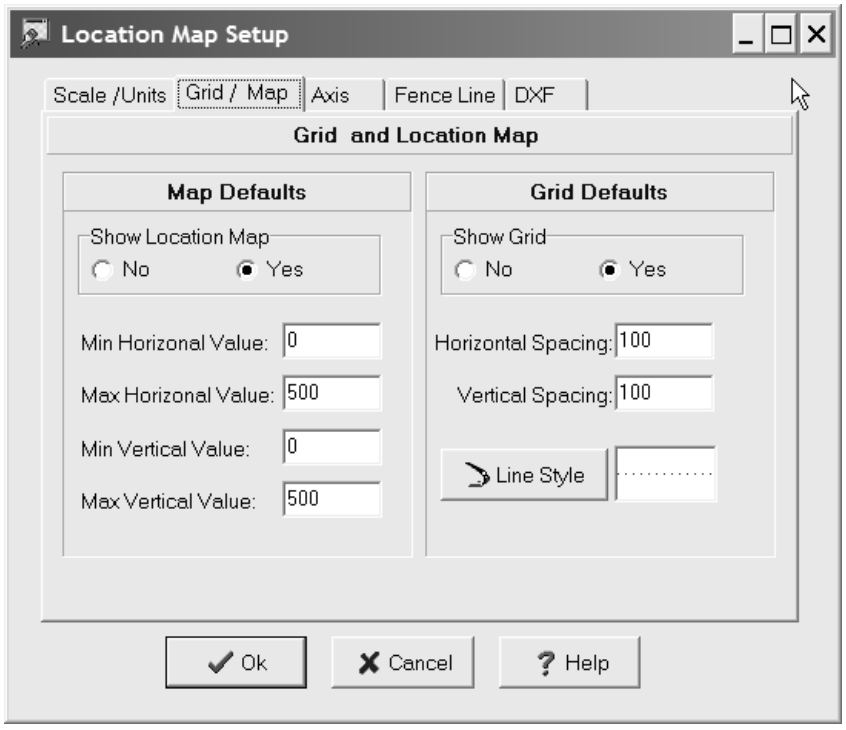
Before the borehole log can be created, a project must be setup to store the borehole data. To create a new project, click on the New button on the Project toolbar. The New Project form shown below will be displayed. Enter the following information in this form:

Project ID: Tutorial
Project Name: Tutorial Project
Directory: \winlog\tutorial



The project directory can be as shown above or any other directory could be used. It is not necessary to enter a client, location, DXF file or reference grid.

After the Ok button is pressed the Location Map Setup form will be displayed. This form is used to specify how the location map for the project will be displayed. There are tabs for adjusting the scales, grid, axes, etc. The most important parameters to set are the minimum and maximum values for the horizontal and vertical axes. For this tutorial we will use the default values for all of the parameters.

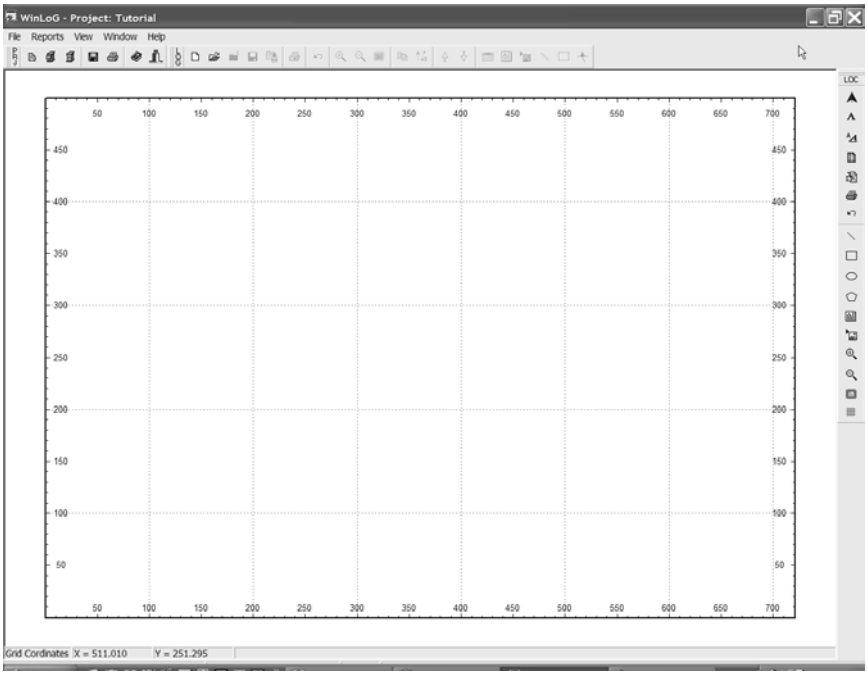


The Location Map Setup form can be edited later by clicking on the Grid button on the Location Map toolbar. For a detailed description of the parameters in this form see Chapter 3.

After the parameters for the location map have been specified and the Ok button pressed, the location map for the project will be displayed.

Tip

In version 4 you can now enter a AutoCAD DXF file that contains a map of the surface features and boundaries. If a DXF file is specified you will have the option to use the minimum and maximum grid values from the file. The DXF will then be overlain on top of the location map of the project.

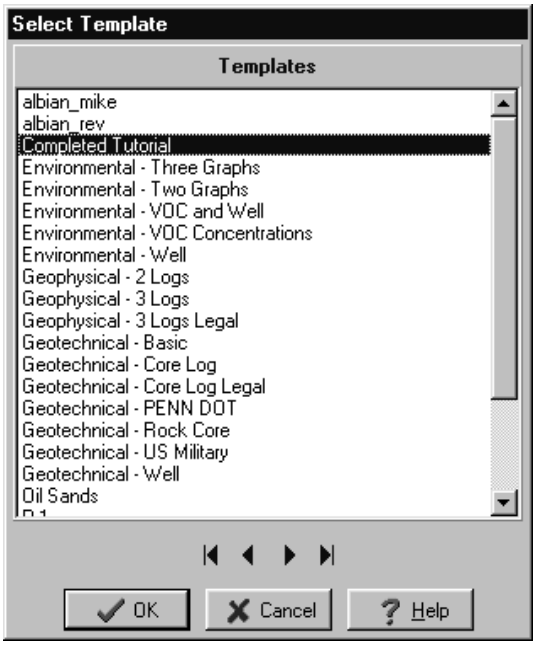


Creating a New Borehole Log

Tip

To make it easier to enter the borehole data, the Borehole Log toolbar should be turned on if it is not currently displayed. If the Show Borehole Log Toolbar option in the View menu is not checked, click on the option to display the toolbar. If the Borehole Loge toolbar is displayed in collapsed mode as shown below, then click on the "LOG" button to expand the toolbar.

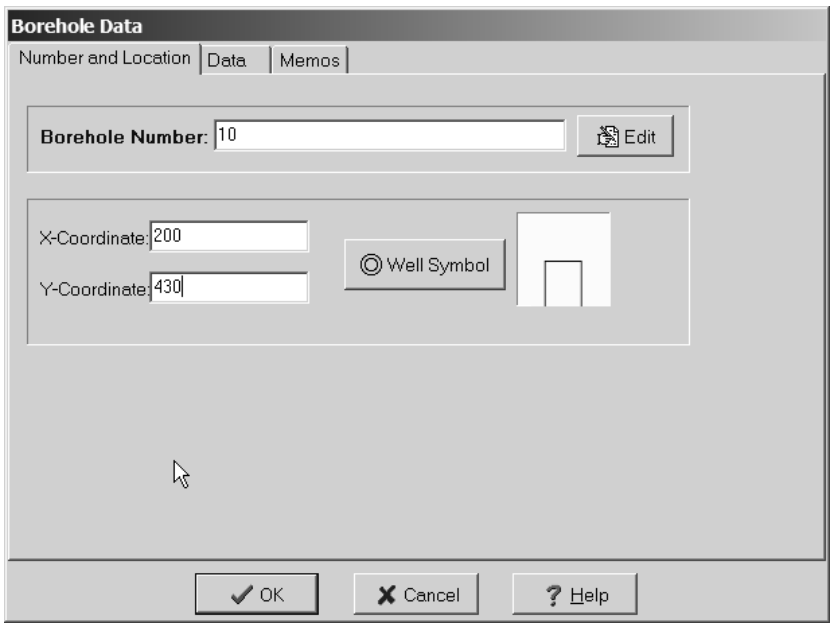
To create a new borehole log and store it in this project, click on the New button on the Borehole Log toolbar or the Location Map toolbar. Then click on the position on the location map for the borehole. Next the Select Template form below will be displayed. Select the "Completed Tutorial" template and press the Ok button.



If the Customizing Template section above has not been completed this template will not appear in the list. This template is required to enter the data in the sections below. It is recommended that the Customizing Template section be completed before proceeding.

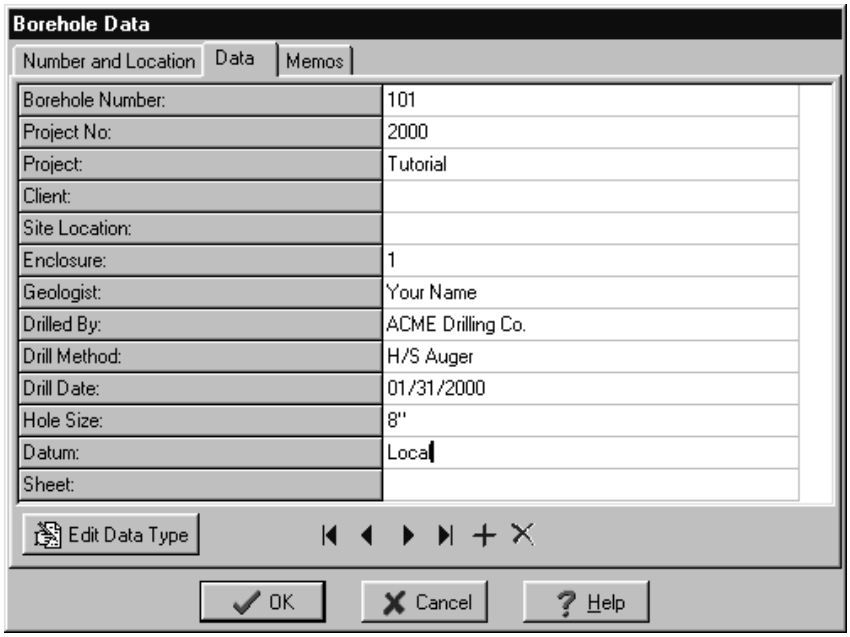
Adding General Borehole Data

After the template has been selected, the Borehole Data form below will be displayed. The first thing that must be entered is the Borehole Number. The Borehole Number is used to store the borehole data and must be unique for each borehole in a project. The X-Coordinate, Y-Coordinate, and Well Symbol are used to show the borehole on the location map.



Enter "101" for the Borehole Number and then click on the Data tab at the top of the form. The Data tab displayed on the next page is used to enter most of the general borehole data that will appear in the header and footer of the borehole log. In addition, memo data can be entered using the Memo tab.

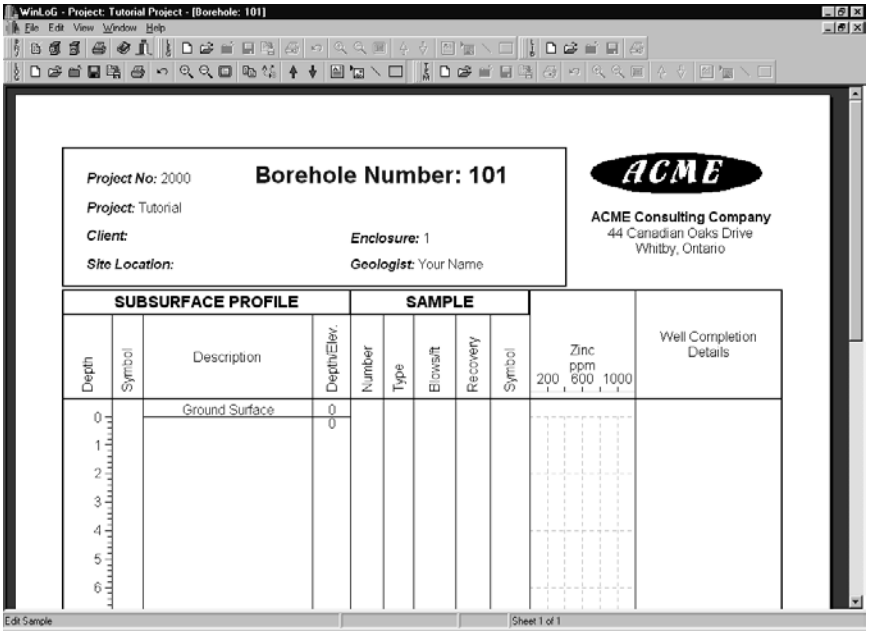
The default types of general borehole data that can be entered are set by the template. Additional data types can be entered as well using the Add button at the bottom of this tab.



For this tutorial enter the following information and then press the Ok button.

Borehole Number: 101
Project No: 2000
Project: Tutorial
Enclosure: 1
Geologist: your name
Drilled By: ABC Drilling Co.
Drill Method: H/S Auger
Drill Date: 01/31/2000
Hole Size: 8"
Datum: Local

After the Ok button is pressed, the borehole log will appear as shown below



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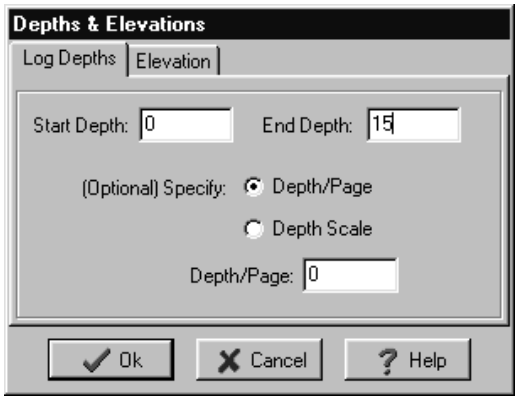
Adding the Borehole Depth

After the borehole has been created and the general information entered as described above, the depth of the borehole should be entered. To enter the depth, click on the depth column with the left mouse button. In the Depth form, shown below, enter the Depth as "15" feet

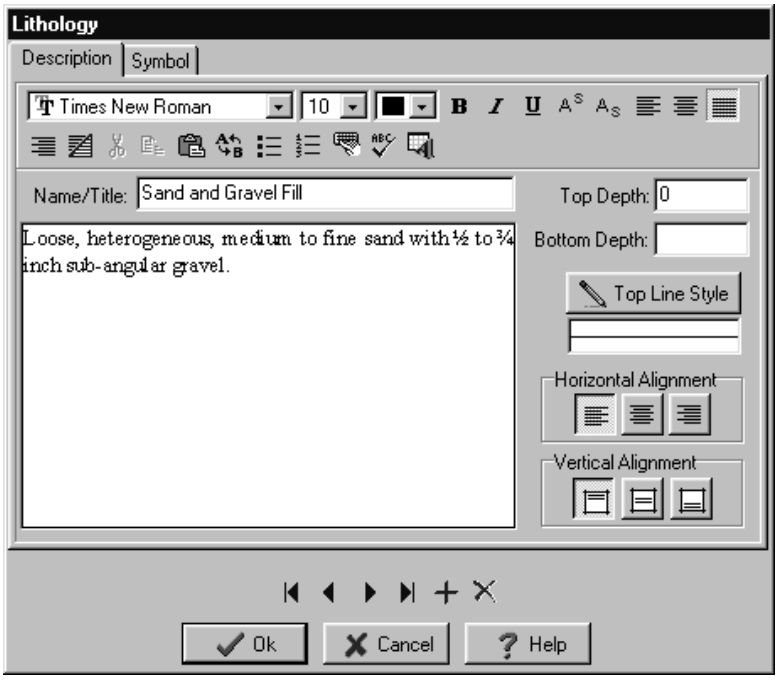


Adding the Lithology

Tip

When entering layers the top layer should be entered first.

Next, the descriptions for each lithologic layer can be entered. The lithology consisted of 2.5 feet of sand and gravel, underlain by 9.5 feet of silty clay, underlain by sand. To enter the lithologic layers, click on the Description column with the left mouse button. To add a new layer, click on the Add button on the Lithologic Layer form below.



After the Add button has been pressed, enter the following information for the first layer.

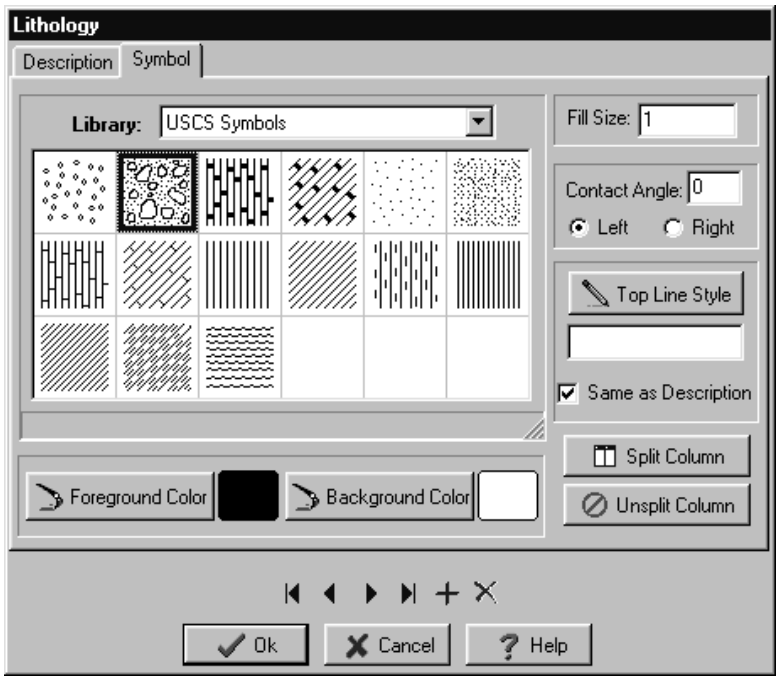
Name/Title: Sand and Gravel Fill

Description: Loose, heterogeneous, medium to fine sand with ½ to ¾ inch sub-angular gravel (To set the text to italics, select the text and then press the Italics button).

Top Depth: 0

Horizontal Alignment: Left

Next, click on the Symbol tab at the top of the form to select a lithologic symbol for the layer. The tab shown below will be displayed. Select the USCS Symbols library and the second symbol.



To add a second layer, select the Description tab and press the Add button. The following information can be entered for this layer.

Name/Title: Silty Clay

Description: Mottled brown and grey silty clay with embedded sand and gravel.

Top Depth: 2.5

Horizontal Alignment: Left

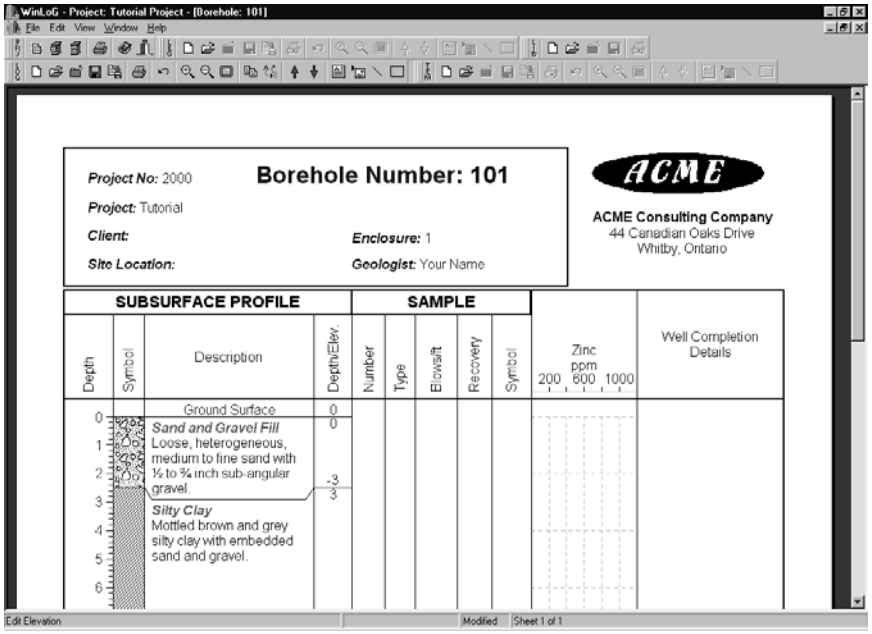
Press the Symbol tab to select a symbol for this layer. Select the first symbol on the third row of the USCS Library.

Press the Add button and the Description tab again to add the third layer. The following information can be entered for this layer.

Name/Title: Sand
Description: Compact, medium to coarse sand.
Top Depth: 9
Horizontal Alignment: Left

Press the Symbol tab to select a symbol for this layer. Select the fifth symbol on the first row of the USCS Library.

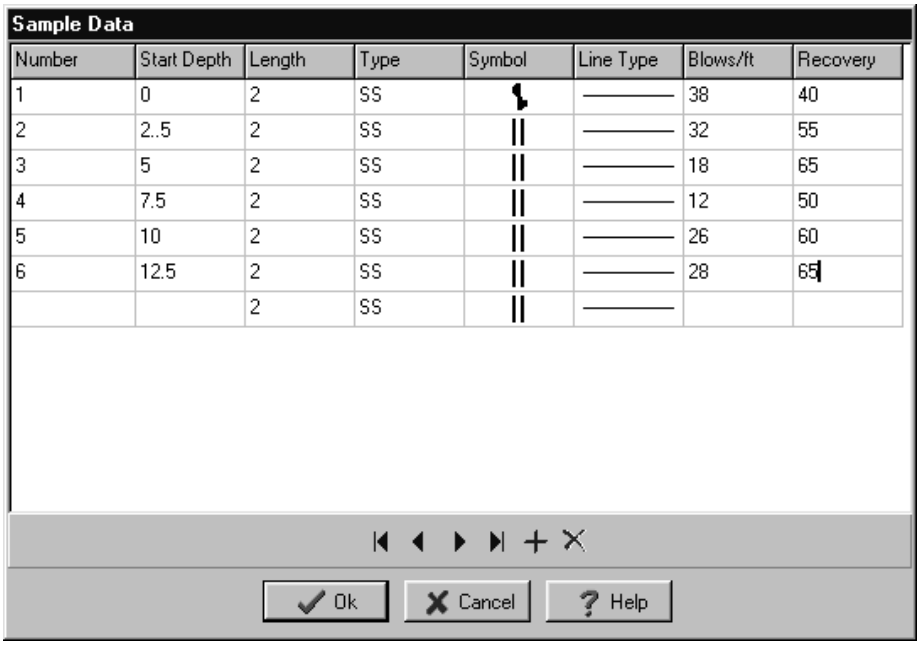
After the Ok button is pressed, the borehole log will appear as shown below.



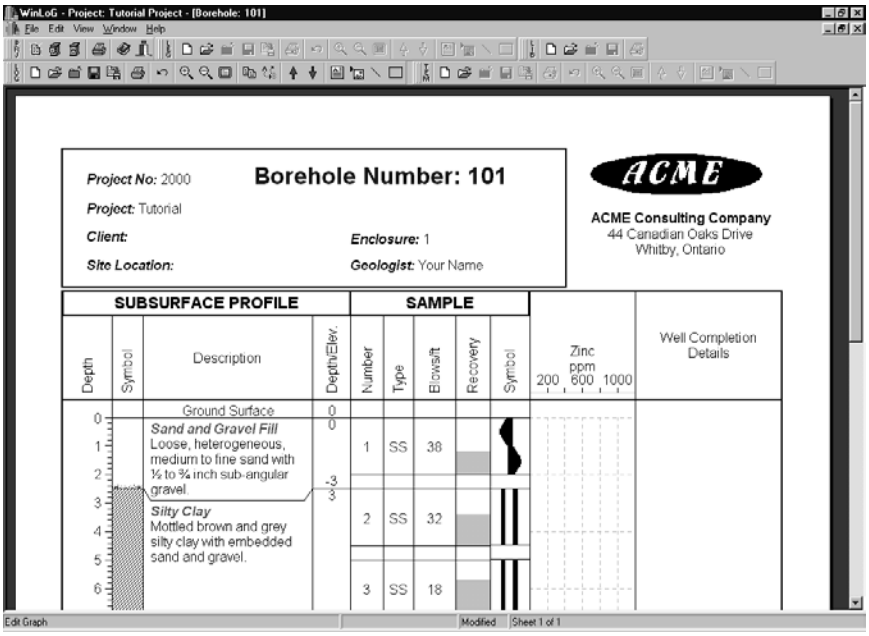
Adding Sample Data

Each sample can have a sample number, top depth, length, sample type, blows/ft, recovery, and other data. At a minimum the sample number, top depth, and length must be entered for each sample.

To enter the sample data for the borehole log, click on any of the sample columns with the left mouse button. The information shown on the Sample Data form below should be entered for the sample data. To enter the next sample press the tab key when at the end of a line or press the Add button at the bottom of the form.

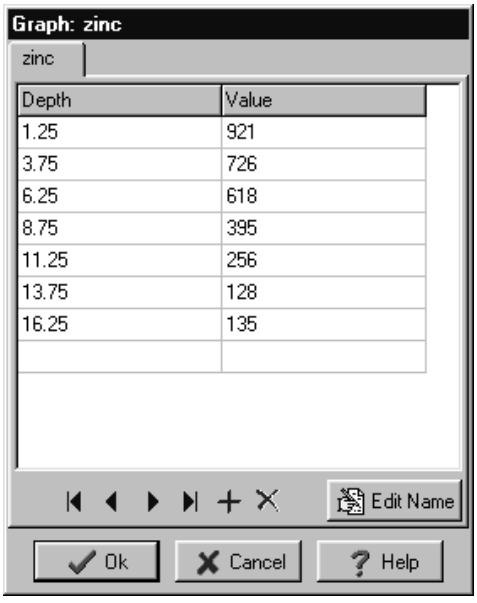


After the sample data has been added, the borehole log will appear as shown on the next page.



Adding Graph Data

The graph data for the zinc concentrations can be entered next. To enter the graph data, click on the graph column with the left mouse button.



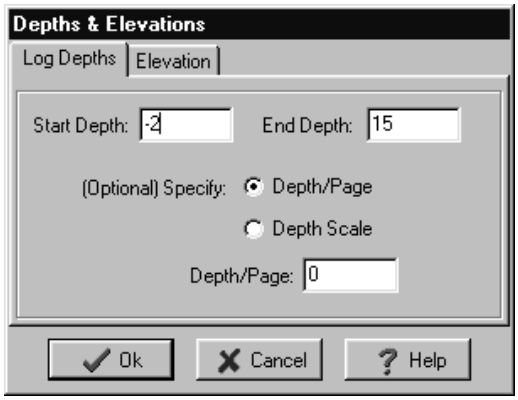
The graph data shown in the Graph form on the previous page can then be entered. To enter the next graph value, press the tab key when at the end of a line or press the Add button at the bottom of the form.

Adding Well Completion Details

Next, well completion details will be added to the borehole log. The well completion details consist of the following:

- a 4 foot, 2" PVC screen from 10 to 14 feet
- a 11.5 foot, 2" PVC riser from 1.5 feet aboveground to 10 feet
- a 10 inch casing from 0 to 3 feet
- a sand pack from 9 to 15 feet
- a bentonite seal from 0 to 9 feet
- a steel aboveground cover with locking cap
- water depth in the well measured at 8.5 feet on January 31, 2000.

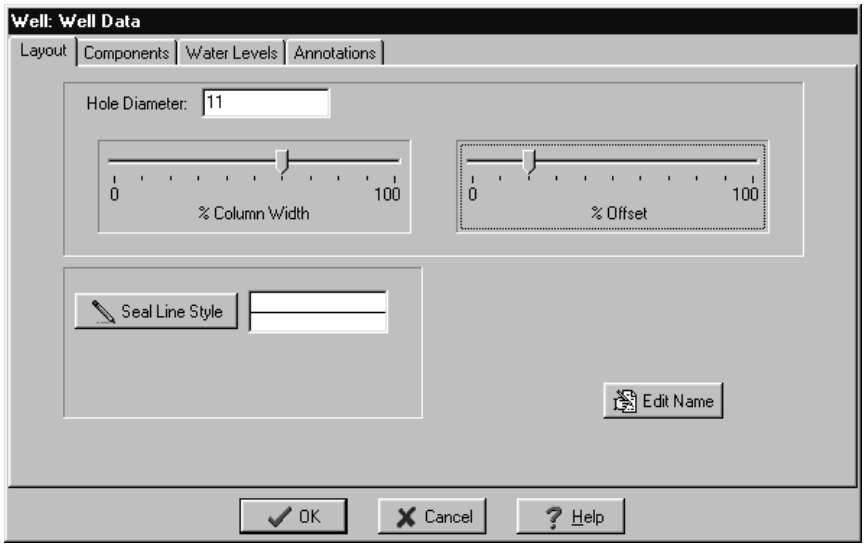
Before entering the well completion details, the start depth of the borehole needs to be adjusted to allow for the aboveground cover. To change the start depth, click on the depth column with the left mouse button. The Depths & Elevation form below will be displayed. Enter the Start Depth as -2 feet.



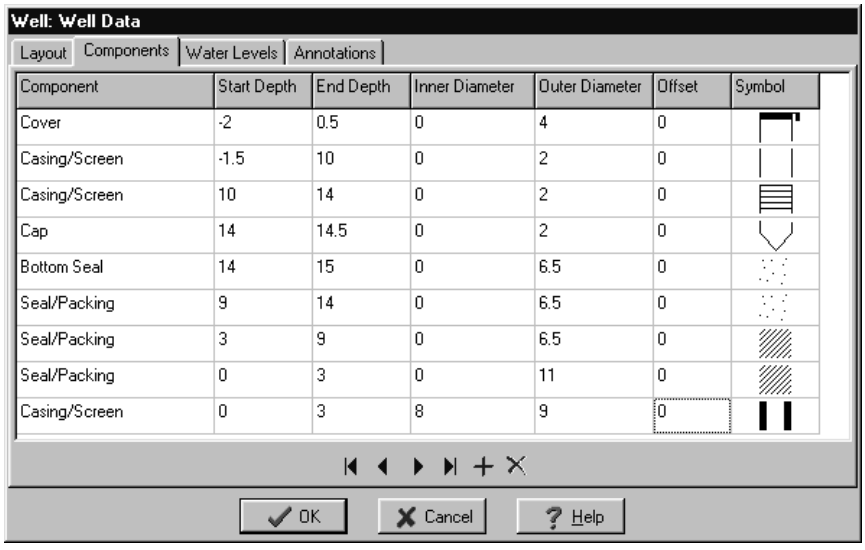
Tip

Negative depths are interpreted to be above ground by the program. To display aboveground well completions, enter a negative depth.

To enter the well completion details, click on the well column with the left mouse button. The Layout tab of the Well Data form on the next page will be displayed. Enter the layout information shown on the tab.

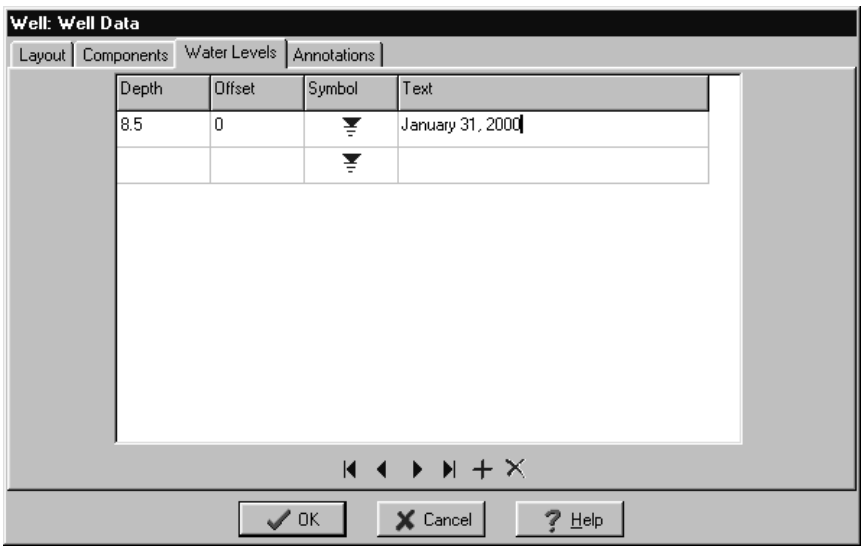


Click on the Components tab at the top of the form and enter the well components shown below. When selecting the symbol for the bottom seal, specify the Horizontal Border as "Bottom". When selecting the symbol for the sand packing, specify the Horizontal Border as "Top". And when selecting the symbol for the lower bentonite seal, specify the Horizontal Border as "None".

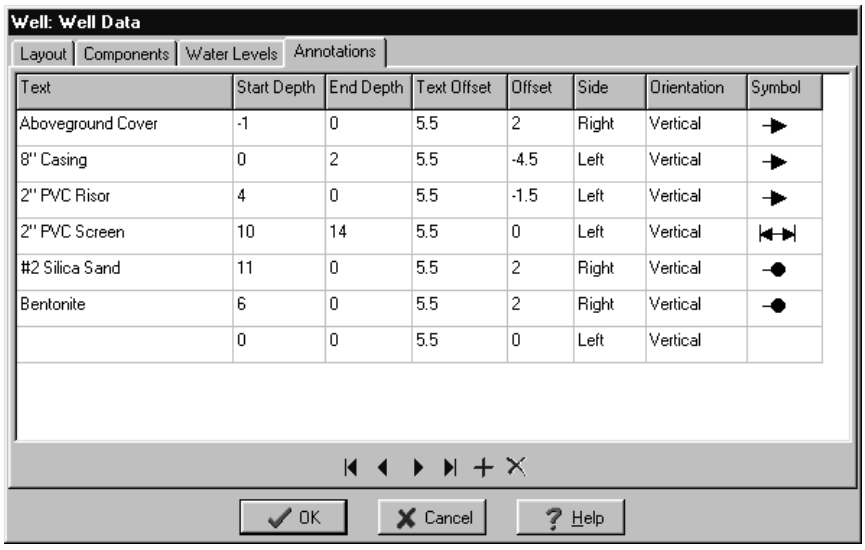


Component	Start Depth	End Depth	Inner Diameter	Outer Diameter	Offset	Symbol
Cover	-2	0.5	0	4	0	
Casing/Screen	-1.5	10	0	2	0	
Casing/Screen	10	14	0	2	0	
Cap	14	14.5	0	2	0	
Bottom Seal	14	15	0	6.5	0	
Seal/Packing	9	14	0	6.5	0	
Seal/Packing	3	9	0	6.5	0	
Seal/Packing	0	3	0	11	0	
Casing/Screen	0	3	8	9	0	

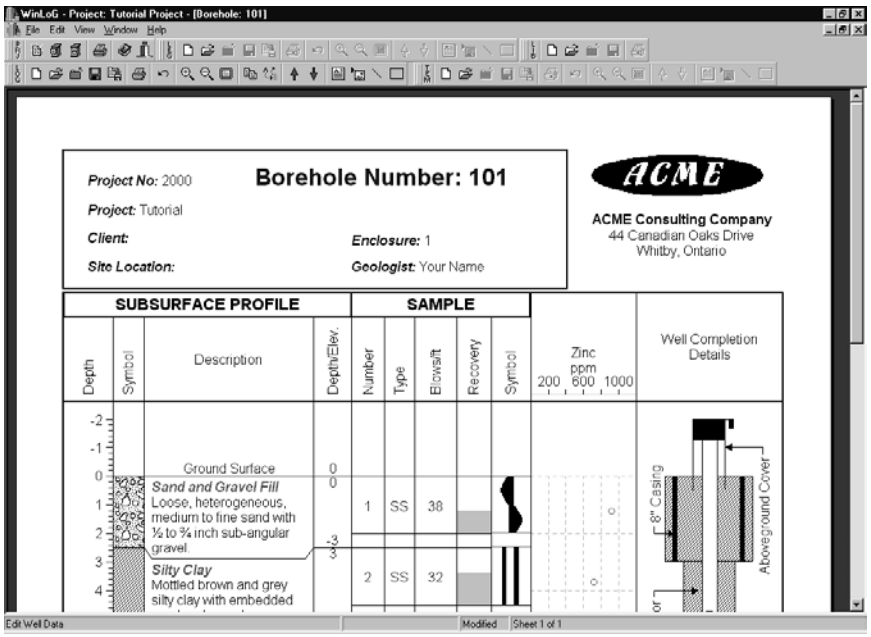
The water level measured can be entered by clicking on the Water Levels tab. Enter the water level information shown on the tab below.



Next, the annotations for the well can be added by clicking on the Annotations tab. For this tutorial, enter the information shown below.



After the well completion details have been entered, the borehole log will appear as shown below.

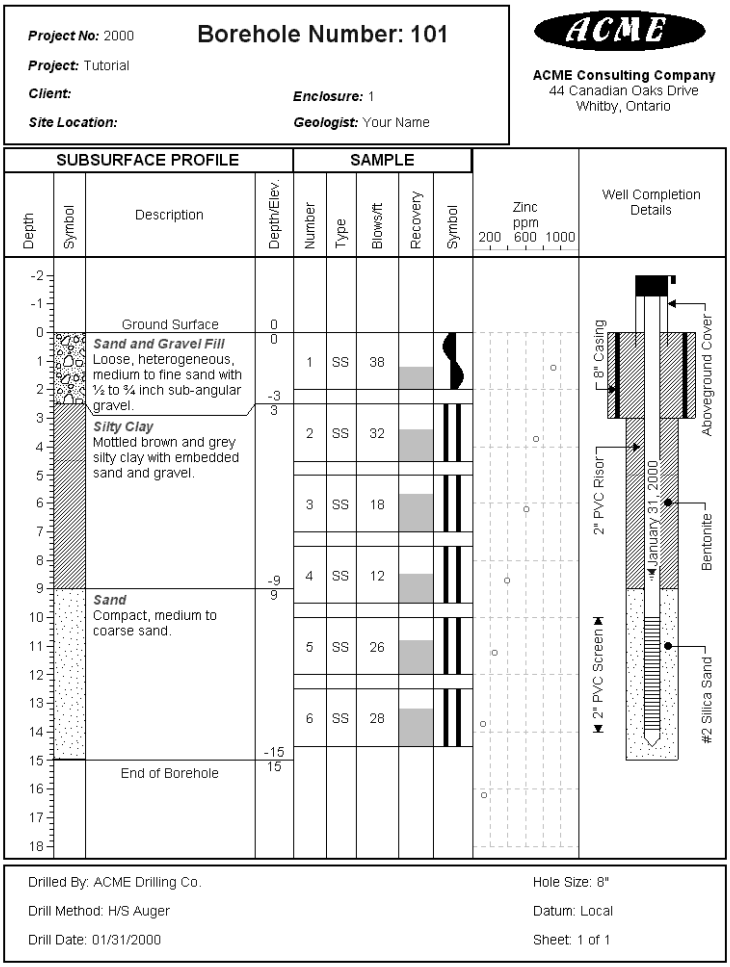


Saving the Borehole Log

Now that all of the data for the borehole log has been entered, the log should be saved. To save the log, press the Save button on the Borehole Log Toolbar.

Printing the Borehole Log

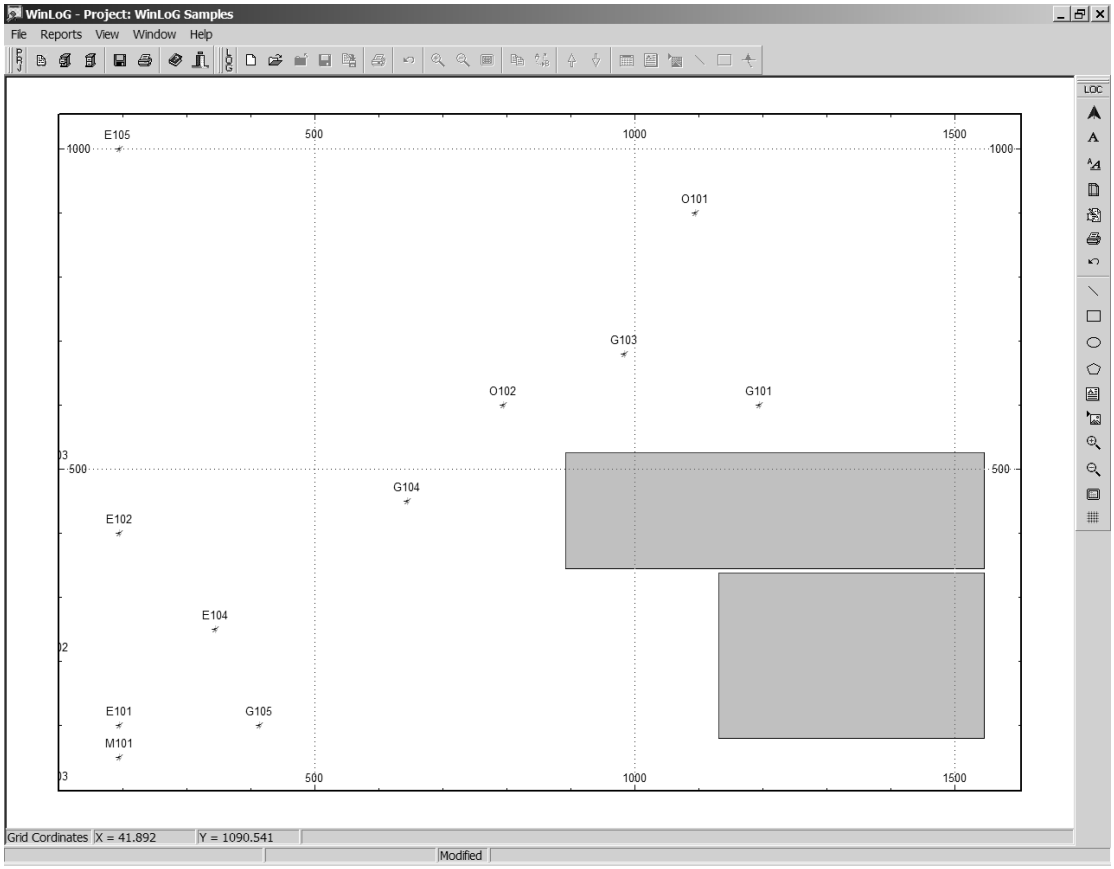
To print the borehole log, press the Print button on the Borehole Log Toolbar. After the button is pressed, a Print form will be displayed. Press the OK button to obtain a printed copy of the log, shown on the next page.



Copying the Borehole Log

The borehole log can now be easily copied to create additional logs with similar layers and sampling. To copy the log, press the Copy button on the Borehole Log Toolbar. This copy can then be edited to create the next borehole log.

3. Projects


WinLoG - Project: WinLoG Samples
File Reports View Window Help
LOC
E105
O101
G103
O102
G101
G104
E102
E104
E101
G105
M101
500
1000
1500
Grid Cordinates
X = 41.892
Y = 1090.541
Modified

3. Projects

As discussed in the introduction, the WinLoG program is based upon the project concept for data storage. Using this method, a separate Microsoft Access 2000 database is used to store each project for each application. Each project is stored in a separate directory, which can be on the same computer or spread across a network. The number of databases for each project will depend upon the applications being used for that project. If for example, the WinLoG and WinFence programs are being used with the project, there will be two project databases.

The names of the project databases are the project name combined with the application name. For example, if the project name is "980205" then the project database name for WinLoG would be "980205winlog.mdb". Typically, this project would be stored in the subdirectory "\980205".

In version 4, projects are displayed using a geographical information system (GIS). The GIS displays a project location map that can be used to display and edit boreholes and cross-sections (if WinFence has been purchased). In addition, site features and AutoCAD files can also be displayed. The project location map can also be printed to be included with the boring logs.

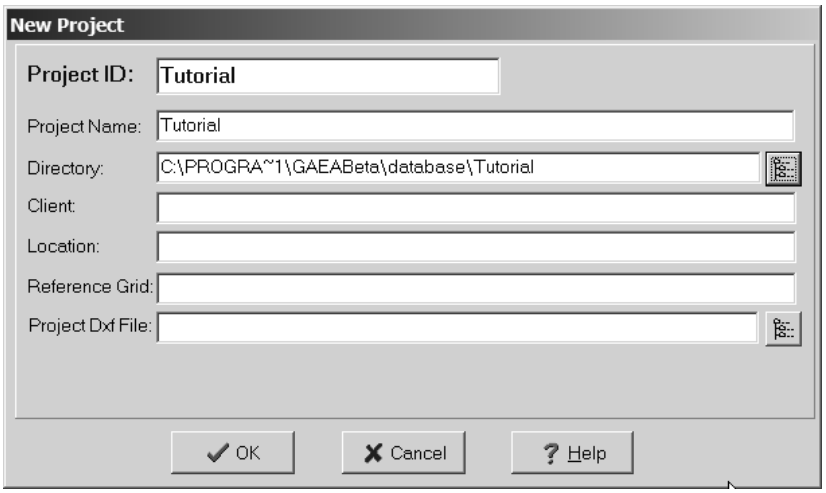
This chapter describes how to:

1. Create a new project.
2. Open an existing project.
3. Open the last project.
4. Close a project.
5. Delete a project.
6. Use the GIS Interface

7. Import a project.
8. Manage a Project Database
9. Backup all WinLoG data
10. Set Project Passwords
11. Print a Project
12. Import/Export Data
13. Import/Export Pocket WinLoG Data
14. Create and Edit Lithology Macros
15. Create and Edit Well Macros
16. Set Program Preferences.

Creating a New Project

To create a new project either select the New Project menu item of the Projects sub menu, or click the New Project button on the Project Toolbar. In addition, at the start of the program the Create a New Project button can be selected on the Startup Form. After one of these tasks is performed, the New Project form below will be displayed.



The following information can be entered for the project:

Project ID: A unique project number (up to 100 characters). The name cannot contain any of the following characters "/ \ # | @ ^ ( ) & ".

Project Name: The name of the project (up to 255 characters).

Tip

If a project was previously created in another application like WinFence or WinSieve, there is no need to create it in WinLoG. It can be opened as an existing project instead.

Tip

It is recommended that each project reside in a separate directory (usually the same as the project ID). Typically, this directory is named after the Project Id or Name. This provides an efficient method to organizing your projects on a network or local computer.

Tip

In version 4 you can now enter a AutoCAD DXF file that contains a map of the surface features and boundaries. If a DXF file is specified you will have the option to use the minimum and maximum grid values from the file. The DXF will then be overlain on top of the location map of the project.

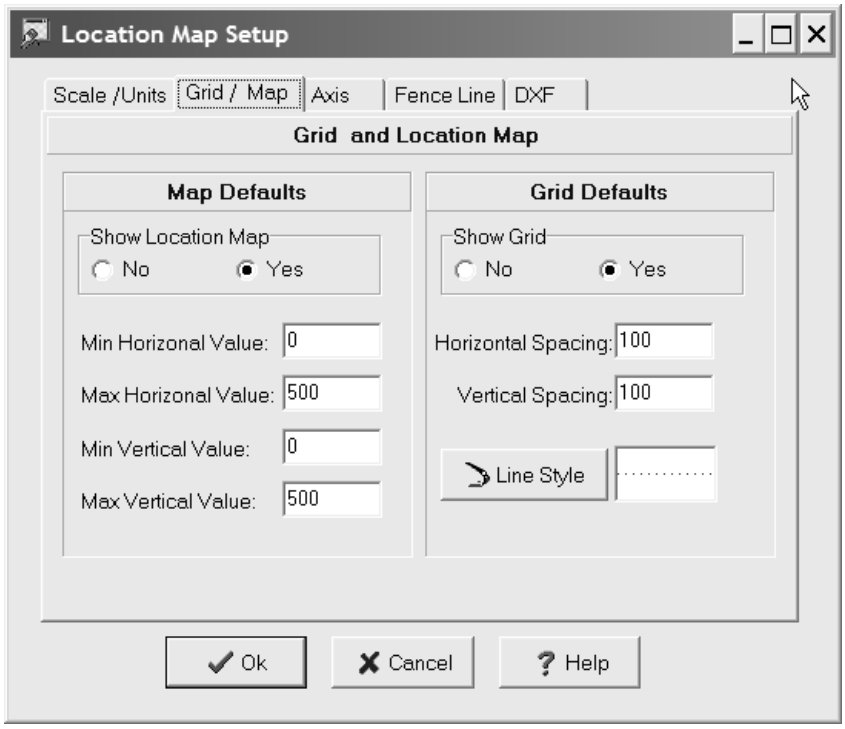
Client: The optional name of the client for the project (up to 255 characters).

Directory: The directory to store the project database tables (up to 255 characters). This directory can be on a local computer or a network server. This is the directory where the project databases will be stored. If the directory entered does not exist, the program will create it.
Location: The location of the project (up to 255 characters). This field is not currently used in WinLoG.

Reference Grid: The reference grid for the X and Y co-ordinate system (up to 255 characters). This field is not currently used in WinLoG.

Project DXF File: The name of the DXF file that contains the AutoCAD drawing for the site. This is an optional file and it will be overlain on the location map.

After the Ok button is pressed the Location Map Setup form will be displayed. This form is used to specify how the location map for the project will be displayed.



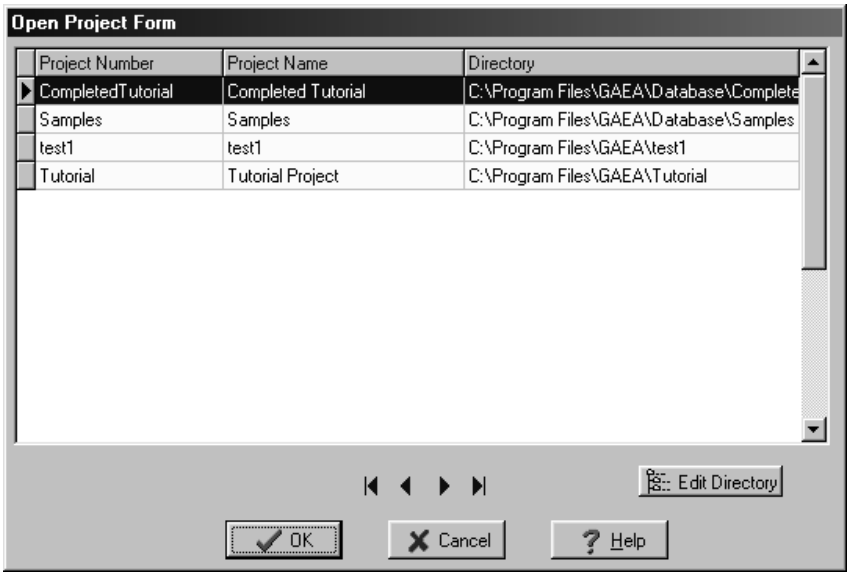
There are tabs for adjusting the scales, grid, axes, etc. The most important parameters to set are the minimum and maximum values for the horizontal and vertical axes.

The Location Map Setup form can be edited later by clicking on the Grid button on the Location Map toolbar. For a detailed description of the parameters in this form see the section on using the GIS interface below.

After the parameters for the location map have been specified and the Ok button pressed, the location map for the project will be displayed.

Opening an Existing Project

To work with an existing project you can open it by selecting the Open Project menu item of the Projects submenu or clicking the Open button on the Project Toolbar. In addition, at the start of the program the Open an Existing Project button can be selected on the Startup Form. A list of available projects will be displayed in the Open Project Form as shown on the next page. The desired project can be selected by clicking on it in the list and then pressing the OK button.



Tip

The list of projects will include projects created in other GAEA applications; such as, WinFence and WinSieve. These projects are listed to allow for the exchange of data between projects.

The directory that a project is stored in can be changed by clicking on the Edit Directory button. This will display a Select Directory form that can be used to select the new directory for the project. Changing the directory will not move any of the project files. The purpose of this option is to allow for the movement of projects on a network.

The arrow buttons at the bottom of the list can be used to move the selection to the start of the list, the previous record, the next record, or the end of the list.

Opening the Last Project

At the start of the program, the last opened project can be selected using the Open Last Project button on the Startup Form. The program automatically stores the last project used.

Tip

If a project contains data from other applications such as WinFence or WinSieve, you will be asked whether to delete this data as well. If the other application data is not deleted, the project will still appear in the project list, but it will not have any WinLoG data.

Closing the Project

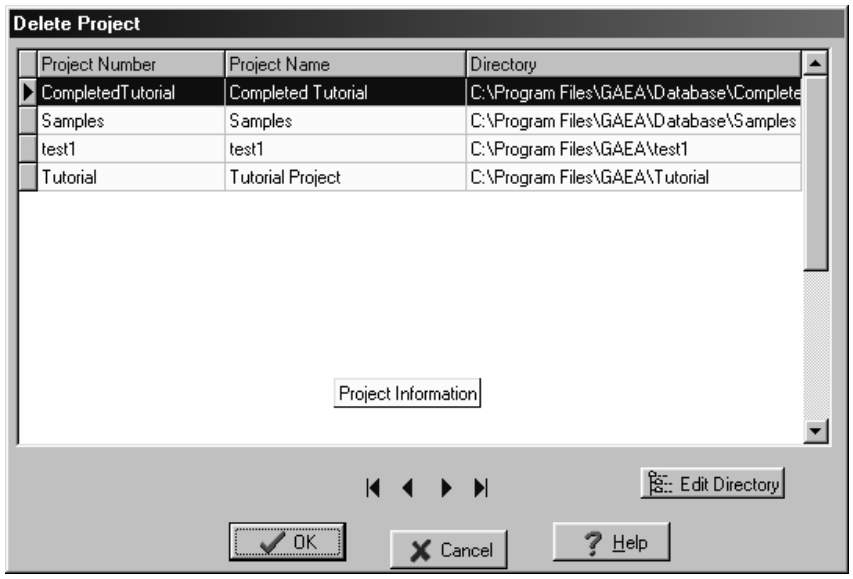
The current project can be closed so that no more changes can be made by selecting the Close Project menu item of the Projects submenu or· clicking the Close button on the Project Toolbar.

Deleting a Project

An existing project can be deleting by selecting the Delete Project menu item from the Projects submenu. When this is selected, a list of existing projects will be displayed as shown on the next page.

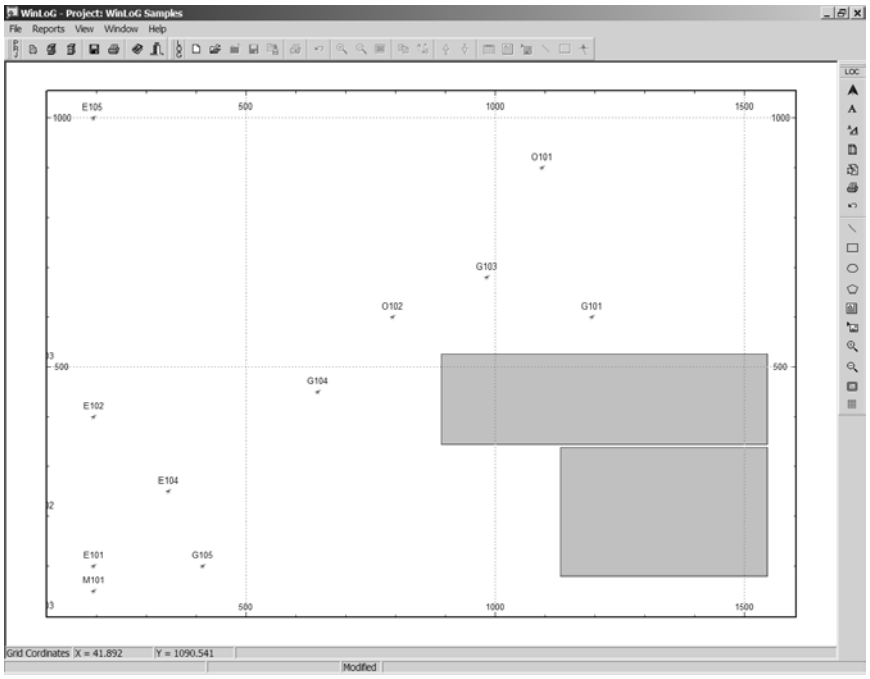
Select the project to be deleted, and then press Ok. **Note that once a project is deleted the data can not be recovered.**

The arrow buttons at the bottom of the list can be used to move the selection to the start of the list, the previous project, the next project, or the end of the list.


Delete Project
Project Number
Project Name
Directory
CompletedTutorial
Completed Tutorial
C:\Program Files\GAEA\Database\Complete
Samples
Samples
C:\Program Files\GAEA\Database\Samples
test1
test1
C:\Program Files\GAEA\test1
Tutorial
Tutorial Project
C:\Program Files\GAEA\Tutorial
Project Information
Edit Directory
OK
Cancel
Help

Using the GIS Interface

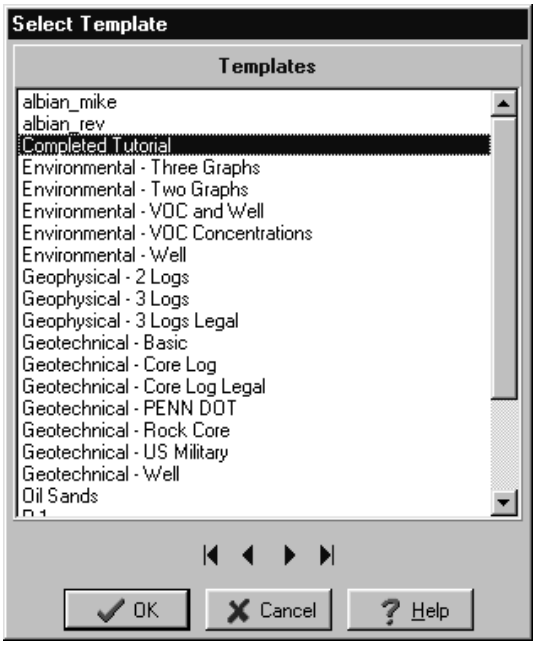
Projects are now displayed using a geographic information system (GIS). The GIS displays a project location map that can be used to display and edit boreholes and cross-sections (if WinFence has been purchased). In addition, site features and AutoCAD files can also be displayed. The project location map can also be printed to be included with the boring logs.



Adding a Borehole

To add a new borehole to the project click on the New button on either the Borehole Log or Location Map toolbars. Then click on the position of the borehole on the location map. After the position of the borehole has been specified the Select Template form on the next page will be displayed.

Select the template to use for the borehole and then press the Ok button to display the new borehole log.



Editing a Borehole

To edit a borehole in the project, just double-click on it on the location map. The selected borehole log will then be displayed.

Editing a Cross-section

To edit a cross-section in the project, just double-click on it on the location map. If you have WinFence installed, the selected cross-section will be displayed in WinFence.

Tip

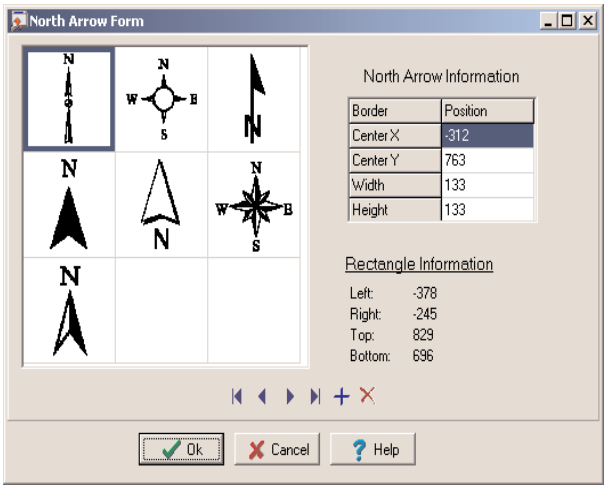
For the cross-section to open, it may be necessary to check that the location of the WinFence program has been specified properly in the Preferences for the program.

Location Map Toolbar

The display and editing of the project location map is controlled using the LOC toolbar on the right side of the map. This toolbar has several buttons which are described in the following sections.

North Arrow Tool

The North Tool Button allows the user to place a North Arrow anywhere on the location map. To use the North Arrow button, click on the button and then click on the location where you would like the north arrow to appear. Once you have clicked on the location map and released the mouse button the North Arrow form will be displayed.



The following can be edited from this form:

Center X: This is the horizontal position of the center of the north arrow in real grid coordinates either feet or meters. If the North Arrow button on the toolbar is used to create the north arrow, the program will fill in the position, otherwise the user will have to enter in the position.

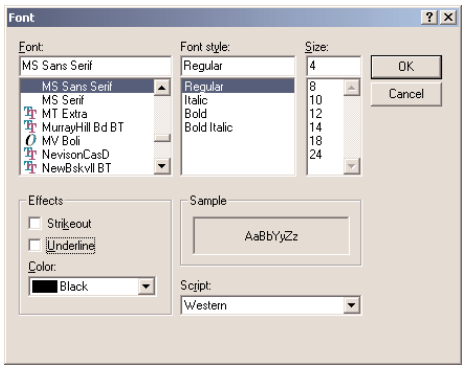
Center Y: This is the vertical position of the center of the north arrow in real grid coordinates either feet or meters. If the North Arrow button on the toolbar is used to create the north arrow, the program will fill in the position, otherwise the user will have to enter in the position.

Width: This is the width of the north arrow in real grid coordinates either feet or meters. If the North Arrow button on the toolbar is used to create the north arrow, the program will fill in the position, otherwise the user will have to enter in the position

Height: This is the height of the north arrow in real grid coordinates either feet or meters. If the North Arrow button on the toolbar is used to create the north arrow, the program will fill in the position, otherwise the user will have to enter in the position

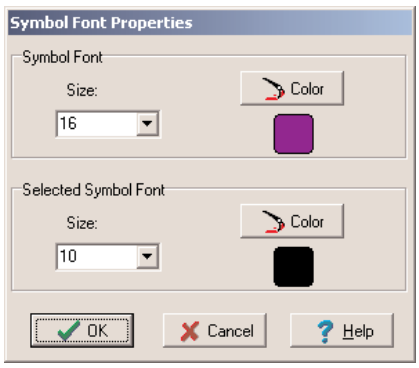
Borehole Text Font Button

The Borehole Text Font button allows the user to edit the size of the borehole text. Clicking on the button will open up the Font Style form. This form allows the user to change the font, font size, font color and font style of the borehole name.



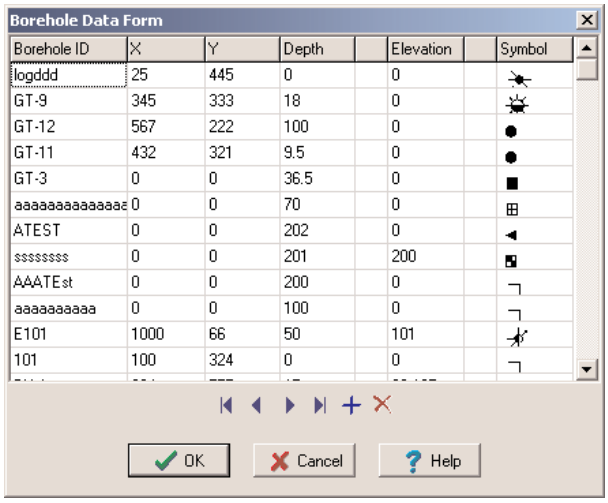
Borehole Symbol Font Button

The Borehole Symbol font button allows the user to edit the size of the borehole symbols . Clicking on the button opens up the Symbol Font Properties form. This form allows the user to change the font size and color of the borehole symbols.



Borehole Data Button

The Borehole Data button allows the user to edit the borehole ID, x-coordinate, y-coordinate, elevation, depth and symbol of the boreholes in the project.



The following can be edited from this form:

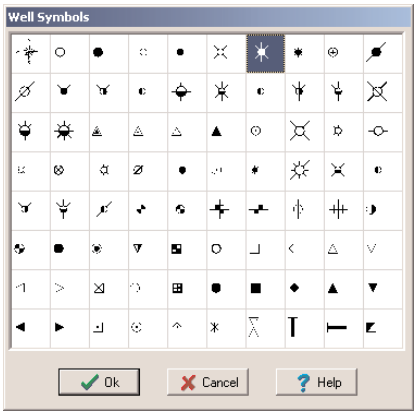
X: This is the horizontal position of the center of the borehole in real grid coordinates either feet or meters (i.e Easting).

Y: This is the vertical position of the center of the borehole in real grid coordinates either feet or meters (i.e. Northing).

Depth: This is the vertical depth of the borehole in real grid coordinates either feet or meters.

Elevation: This is the elevation at the top of the borehole real grid coordinates either feet or meters.

Symbol: This is the borehole Symbol that is used to represent the borehole. The user can change the borehole symbol by double clicking on the borehole symbol column . This act opens up the Well Symbols form. The user can then select the symbol they would like to use by high lighting it and clicking the OK button.

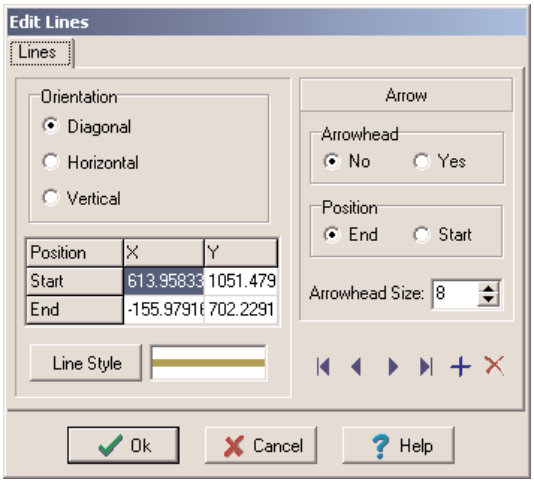


Print Location Map Button

The Print Location Map Button allows the user to print the project location map. Clicking the button opens up a standard print dialog that allows the user to select the print range and the number of copies. More advanced print properties can be set by clicking print properties on the "Properties" button. Most printers allow you to change things such as the Print Quality, Paper Type , Paper Size, Paper Orientation, Paper Color, etc.

Line Tool

The Line tool allows the user to place a line anywhere on the location map. To use the Line tool select it by clicking on the Line tool button. Then click and hold down the left mouse button at the first point of the line and drag the cursor across the screen to the end point of the line. When the user is satisfied that they have the cursor over the appropriate end point they should release the mouse button. Once this is done, the program will open the Edit Line form for the user. The user can then decide the orientation of the line, the line style, and they can tweak the start and end positions if they desire.



The user can also add an arrow to the line at either the Start or End position, with the arrowhead size of their choice.

The following can be edited from this form:

Start X: This is the horizontal position of the start of the line in real grid coordinates either feet or meters. If the Line button on the toolbar is used to create the line, the program will fill in the position, otherwise the user will have to enter in the position.

Start Y: This is the vertical position of the start of the line in real grid coordinates either feet or meters. If the Line button on the toolbar is used to create the line, the program will fill in the position, otherwise the user will have to enter in the position.

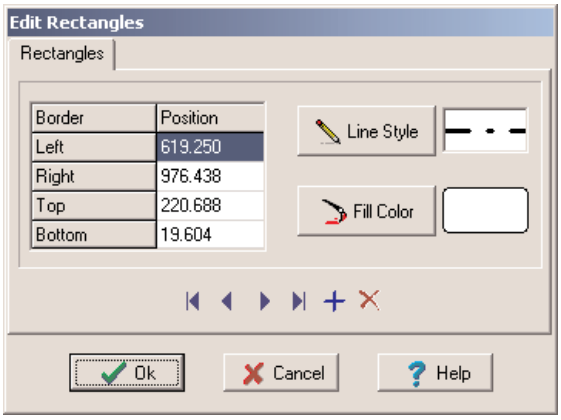
End X: This is the horizontal position of the end of the line in real grid coordinates either feet or meters. If the Line button on the toolbar is used to create the line, the program will fill in the position, otherwise the user will have to enter in the position.

End Y: This is the vertical position of the end of the line in real grid coordinates either feet or meters. If the Line button on the toolbar is used to create the line, the program will fill in the position, otherwise the user will have to enter in the position.

Line Style: Clicking the Line Style button opens a Line properties form on which the user can select the Line Style (Solid, Dashed, Dash Dot, etc), thickness and color of the line.

Rectangle Tool

The Rectangle Tool allows the user to place a rectangle anywhere on the location map. To use the Rectangle tool select it by clicking on the Rectangle tool button. Then click and hold down the left mouse button at the upper left hand corner of the rectangle and drag the cursor across the screen to the bottom right hand corner of the rectangle. When the user is satisfied that they have the cursor over the appropriate end point they should release the mouse button. Once this is done, the program will open the Edit Rectangles form below.



The following can be edited from this form:

Left: This is the position of the left border of the rectangle in real grid coordinates either feet or meters. If the Rectangle button on the toolbar is used to create the rectangle, the program will fill in the position, otherwise the user will have to enter in the position.

Right: This is the position of the right border of the rectangle in real grid coordinates either feet or meters. If the Rectangle button on the toolbar is used to create the rectangle the position will be filled in by the program, otherwise the user will have to enter in the position.

Top: This is the position of the top border of the rectangle in real grid coordinates either feet or meters. If the Rectangle button on the toolbar is used to create the rectangle the position will be filled in by the program, otherwise the user will have to enter in the position.

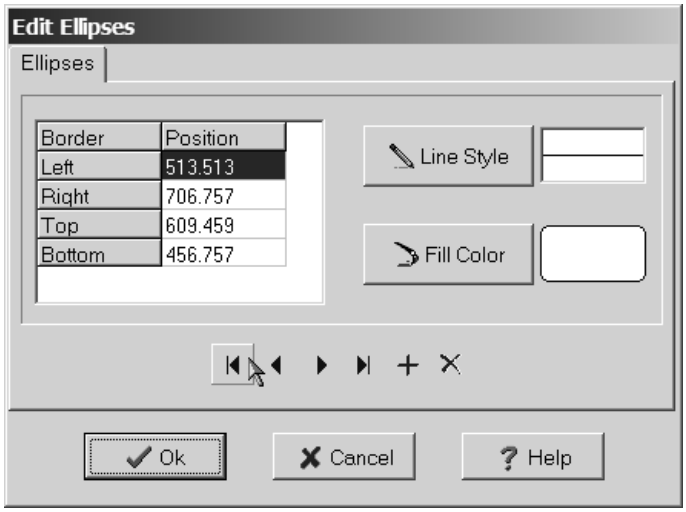
Bottom: This is the position of the bottom border of the rectangle in real grid coordinates either feet or meters. If the rectangle button on the toolbar is used to create the rectangle the position will be filled in by the program, otherwise the user will have to enter in the position.

Line Style: Clicking the Line Style button opens a Line properties form on which the user can user select the Line Style (Solid, Dashed, Dash Dot, etc) thickness and color of the line.

Fill Color: Clicking the Fill Color button open up the Color form from which the user can select the color they wish to have on the interior of the rectangle.

Ellipse Tool

The ellipse tool allows the user to place an ellipse anywhere on the location map. To use the Ellipse tool, select it by clicking once on the Ellipse tool button. Then click and hold down the left mouse button at the upper left hand corner of the ellipse and drag the cursor across the screen to the bottom right hand corner of the ellipse. Once this is done, the program will open the Edit Ellipse form on the next page.



The following can be edited on this form:

Left: This is the position of the left border of the ellipse in real grid coordinates either feet or meters. If the Ellipse button on the toolbar is used to create the ellipse the position will be filled in by the program, otherwise the user will have to enter in the position.

Right: This is the position of the right border of the ellipse in real grid coordinates either feet or meters. If the Ellipse button on the toolbar is used to create the ellipse the position will be filled in by the program, otherwise the user will have to enter in the position.

Top: This is the position of the top border of the ellipse in real grid coordinates either feet or meters. If the Ellipse button on the toolbar is used to create the ellipse the position will be filled in by the program, otherwise the user will have to enter in the position.

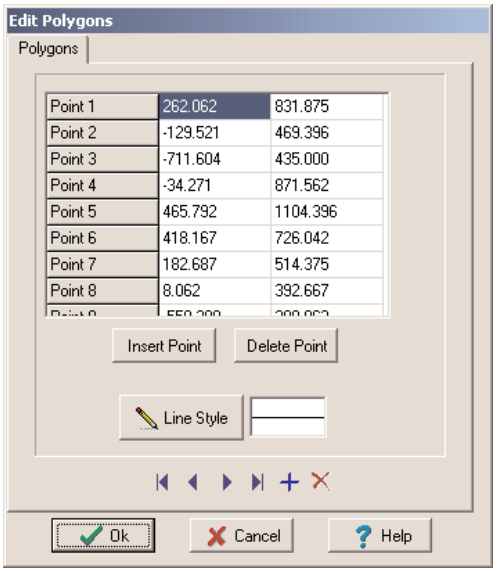
Bottom: This is the position of the bottom border of the ellipse in real grid coordinates either feet or meters. If the Ellipse button on the toolbar is used to create the ellipse the position will be filled in by the program, otherwise the user will have to enter in the position.

Line Style: Clicking the Line Style button opens a Line properties form on which the user can user select the Line Style(Solid, Dashed, Dash Dot, etc), thickness and color of the line.

Fill Color: Clicking the Fill Color button open up the color form from which the user can select the color they wish to have on the interior of the ellipse.

Polyline Tool

The Polyline tool allows the user to place a polyline anywhere on the location map. To use the Polyline tool select it by clicking on the polyline tool button. Then click the left mouse button at the first point of the polyline. Move the cursor to the second point of the polyline then left click there as well. The user can continue to add points to their polyline until all points have been added. Then to finish the polyline simply click the right mouse button. Once this is done, the program will open the Edit Polygons form below.



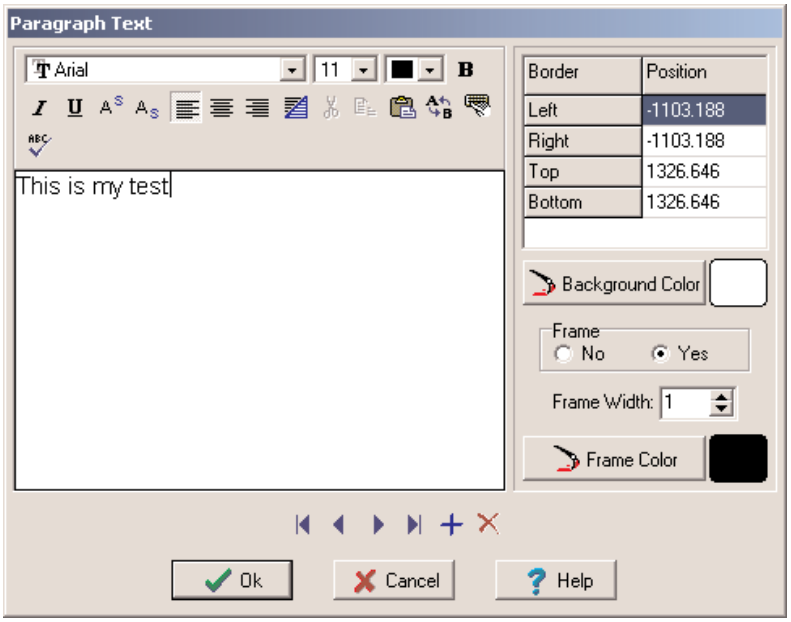
The following can be edited on this form:

Point Coordinates: All point coordinates are in true grid coordinates, 1283 N, 284 E is 1283, 284 in meters or feet.

Line Style: Clicking the Line Style button opens a Line Properties form on which the user can user select the Line Style(Solid, Dashed, Dash Dot, etc), thickness and color of the line.

Paragraph Tool

To add a Paragraph Text box to the location map click on the Paragraph button on the Toolbar. Next using the left mouse button click on the location of the upper left corner if the paragraph textbox. Then while holding the left mouse button down drag the mouse to the location of the lower right corner. After the button has been released, the Paragraph Text form will be displayed.



The following information can be entered and edited using this form:

Text: This is the text for the paragraph. There is no limit to the length of the text. The Rich Text toolbar at the top of the form is used to format the text. This toolbar is described at the bottom of this section.

Left: This is the position of the left border of the paragraph in real grid coordinates either feet or meters. If the Paragraph button on the toolbar is used to create the paragraph, the program will fill in this position. The units of measurement are specified in the location map grid settings.

Tip

Floating paragraph text boxes can be added anywhere on the location map. These text boxes are displayed over top of any information on the location map. There is no limit to the number of paragraph text boxes that can be displayed. Paragraph text boxes are typically used to add comments or a legend.

Right: This is the position of the right border of the paragraph in real grid coordinates either feet or meters. If the Paragraph button on the toolbar is used to create the paragraph, the program will fill in this position. The units of measurement are specified in the location map grid settings.

Top: This is the position of the top border of the paragraph in real grid coordinates either feet or meters. If the Paragraph button on the toolbar is used to create the paragraph, the program will fill in this position. The units of measurement are specified in the location map grid settings.

Bottom: This is the position of the bottom border of the paragraph in real grid coordinates either feet or meters. If the Paragraph button on the toolbar is used to create the paragraph, the program will fill in this position. The units of measurement are specified in the location map grid settings.

Background Color: This is the background color of the paragraph text box. When the Background color button is pressed, a Color form is displayed. Using this form, a basic color can be selected or a custom color can be specified.

Frame: Select yes to display a frame around the paragraph text.

Frame Width: This is the line width of the frame around the paragraph text. If no frame is selected above, this field will not be displayed.

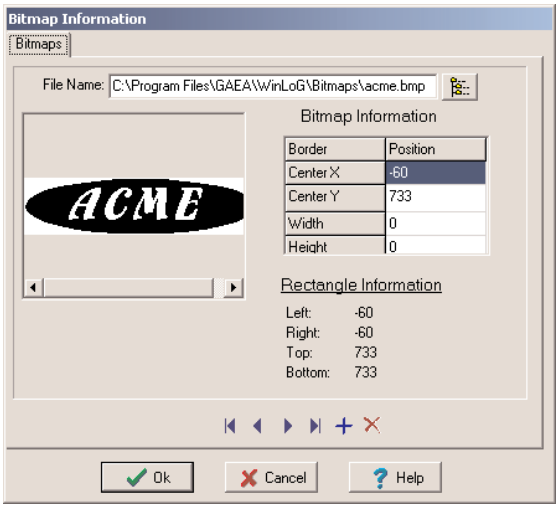
Frame Color: This is the color of the frame to display around the paragraph text. When the Frame Color button is pressed a Color form is displayed. Using this form, a basic color can be selected or a custom color can be specified. If no frame is selected above, this field will not be displayed.

At the top of the Paragraph Text form is the Rich Text toolbar, this toolbar can be used to modify the font characteristics of the text. Before selecting a speed button, the text to be modified should be selected with the mouse.

Bitmap Tool

Bitmaps contained in Windows bitmap (BMP or JPEG) files can be added anywhere on a log. These bitmaps can be used to show company logos, site plans, and other graphical information. Bitmaps are displayed over top of any information on the log. There is no limit to the number of bitmaps that can be displayed.

To add a bitmap, click on the Bitmap button on the Toolbar. Next using the left mouse button click on the location of the center of the bitmap. The Open form below will then be displayed. Select the bitmap file and then press the Open button.



The Bitmap Information form above will then be displayed. The following can be edited from this form:

File Name: This is the name of the bitmap file to display on the location map. To change the name of the file, edit this name or click on the button to the right of the name. If the button to the right is pressed, an Open bitmap file form will be displayed.

Tip

WinLoG requires bitmaps (pictures) to be in Windows bitmap format (BMP or JPEG). Many common graphics programs can convert to this format.

Center X: This is the horizontal position of the center of the bitmap in real grid coordinates either feet or meters. If the Bitmap button on the toolbar is used to create the bitmap the program will fill in the position, otherwise the user will have to enter in the position.

Center Y: This is the vertical position of the center of the Bitmap in real grid coordinates either feet or meters. If the Bitmap button on the toolbar is used to create the Bitmap, the program will fill in the position, otherwise the user will have to enter in the position.

Width: This is the width of the bitmap in real grid coordinates either feet or meters. If the Bitmap button on the toolbar is used to create the bitmap , the program will fill in the position, otherwise the user will have to enter in the position.

Height: This is the height of the bitmap in real grid coordinates either feet or meters. If the Bitmap button on the toolbar is used to create the Bitmap, the program will fill in the position, otherwise the user will have to enter in the position.

Zoom In Button

The Zoom In button allows the user to zoom in the field of view to a specific area. To zoom into a specific area all the user needs to do is click on the Zoom-In button on the toolbar. Next using the left mouse button click on the location of the upper left corner of the desired viewing area. Then while holding the left mouse button down drag the mouse to the location of the lower right corner of the viewing area. Then release the mouse button. Once the mouse button is released the new viewing area is shown.

Zoom Out Button

The Zoom Out button allows the user to zoom out from the users field of view by 50% each time the button is clicked.

Zoom Full Button

The Zoom Full button adjusts the location map view to the grid coordinates that are set in the Location Map setup. Just click once to view the full map size.

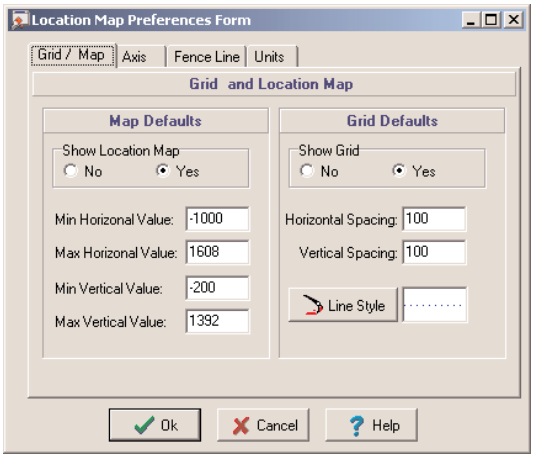
Location Map Setup Button

The Location Map setup button allows the user access to the setup preferences of the location map. Clicking on the button opens up the Location Map Preferences Form. There are four tabs on this form:

- Grid / Map tab
- Axis tab
- Fence Line tab
- Units Tab

Grid / Map Tab

The Grid / Map Tab sets the Grid and Map defaults for the project location map.



The following information can be entered and edited using this tab:

Show Location Map: This radio button allows the user to turn the location map on or off.

Min Horizontal Value: This is the position of the left border of the location map in real grid coordinates of either feet or meters. The units of measurement are specified on the Units tab.

Max Horizontal Value: This is the position of the right border of the location map in real grid coordinates of either feet or meters. The units of measurement are specified on the Units tab.

Min Vertical Value: This is the position of the bottom border of the location map in real grid coordinates of either feet or meters. The units of measurement are specified on the Units tab.

Max Vertical Value: This is the position of the top border of the location map in real grid coordinates of either feet or meters. The units of measurement are specified on the Units tab.

Show Grid: This is used to turn the grid on and off.

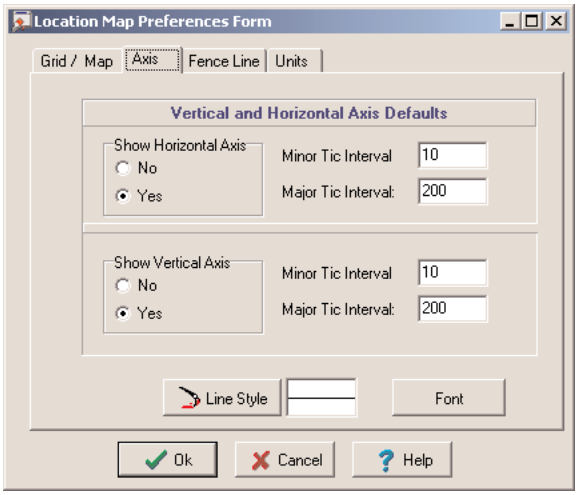
Horizontal Spacing: This is the spacing between horizontal grid lines as shown on the location map in real grid coordinates of either feet or meters.

Vertical Spacing: This is the spacing between vertical grid lines as shown on the location map in real grid coordinates of either feet or meters.

Line Style Button: Clicking the line style button opens a Line properties form on which the user can user select the type of grid lines.

Axis Tab

The Axis Tab sets the horizontal and vertical axis defaults for the project location map.



The following information can be entered and edited using this tab:

Show Horizontal Axis: This radio button allows the user to turn the Horizontal axis on the location map on or off.

Show Vertical Axis: This radio button allows the user to turn the Vertical axis of the location map on or off.

Min Tic Interval: This is interval (in feet or metres) at which small tic occurs on both the horizontal and vertical axis of the location map. The units of measurement are specified on the Units tab.

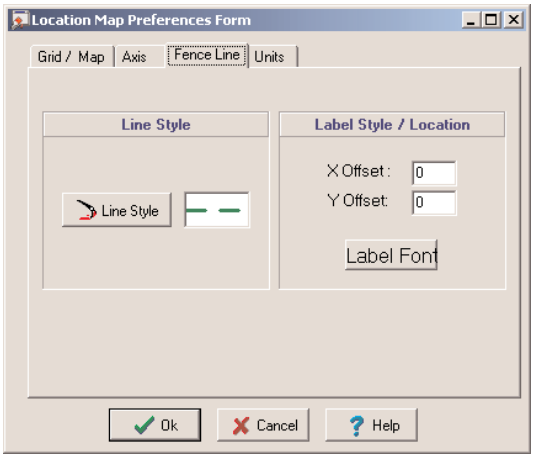
Max Tic Interval: This is interval (in feet or metres) at which large tics and axis labels occurs on both the horizontal and vertical axis of the location map. The units of measurement are specified on the Units tab.

Line Style Button: Clicking the Line Style button opens a Line Properties form on which the user can user select the type of axis line they would like on the location map.

Font Button: The Font button allows the user to edit the size of the axis font . Clicking on the button opens up the Font Style form.

Fence Line Tab

The Fence Line tab controls the appearance of the line style and label style of cross-sections on the location map.



The following information can be entered and edited using this tab:

X Offset: This is the offset (in feet or metres) of the labels from the beginning and end of the fence lines in the horizontal direction. The units of measurement are specified on the Units tab.

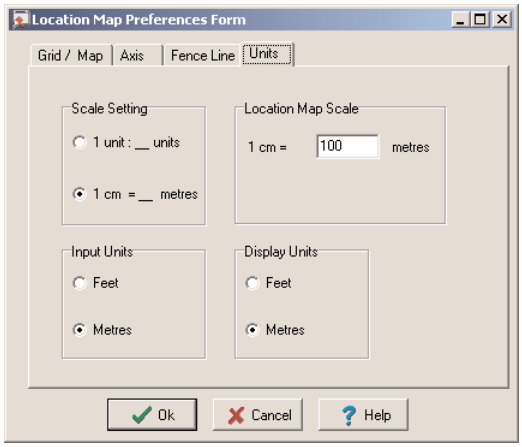
Y Offset: This is the offset (in feet or metres) of the labels from the beginning and end of the fence lines in the vertical direction. The units of measurement are specified on the Units tab.

Line Style Button: Clicking the line style button opens a Line properties form on which the user can user select the type of fence line representation they would like on the location map.

Font Button: The Font button allows the user to edit the fence line font. Clicking on the button opens up the Font Style form. This form allows the user to change the font, font size, font color and font style.

Units Tab

The Units tab controls the scale type, scale, input units, and display units of the location map.



What is a map scale??

To make a map useful, mapmakers establish and indicate a consistent relationship between size on the map and size in real life. This relationship is the map scale. For instance, a map may use one inch to represent what is actually 24,000 inches on earth. Mapmakers express scale as a mathematical ratio, or fraction. The unit on the map is expressed as the number one (numerator). A scale of 1:24,000 would be read as "one to twenty-four thousand." We cannot easily visualize a value such as 24,000 inches, so maps usually not only show the scale ratio but convert the ratio to units of measurement. For example, a 1:24,000 map can also be expressed as 1 inch = 2000 feet, or about four-tenths of a mile.

When choosing a map, consider whether a small scale or large scale suits your purposes better.
• A large-scale map shows a small land area in great detail.
• A small-scale map shows less detail, but a larger land area.

For instance, a USA national map is a much smaller-scale map than a map showing the details of a specific county or zip code.

The following information can be entered and edited using this tab:

Scale Setting: This radio button allows the user to change the scale setting to either a dimensionless ratio or to a given distance in metres.

Location Map Scale: This text box allows the user to enter the scale they wish to have the location map drawn at. If the scale setting is at 1 unit: 50 units then for example 1 metre on the print out is equal to 50 metres in the real world. If the scale is 1inch = 25 feet then 1 screen inch is equal to (12 * 25) = 300 inches in the real world.

Input Units: Input units are the units that are stored in the database and that locations one the screen are stored in.

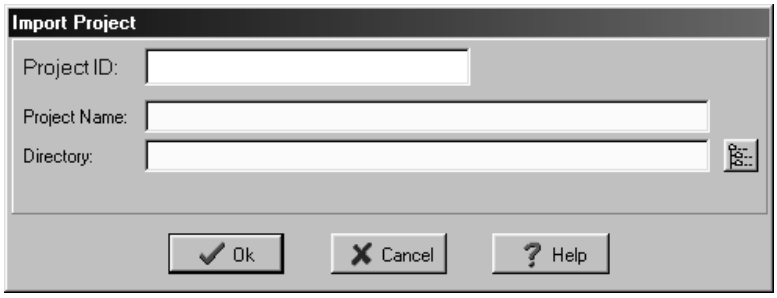
Display Units: Display units are the units that are displayed on the screen. For example, the input units from the database can be in metres but the display units maybe feet.

Tip

When importing a project it is very important that the correct Project ID be specified. The Project ID is used to determine the name of the database file to be imported. For example, if the Project ID is 98020 then the name of the database file to import would be 98020winlog.mdb.

Importing a Project

Existing projects can be imported by selecting the Import Project menu item of the Projects submenu. When selected the Import Project form below will be displayed.



This form can be used to specify the following information:

Project ID: A unique project number (up to 100 characters). The name cannot contain any of the following characters “/ \ # | @ ^ ( ) & ”.

Project Name: The name of the project (up to 255 characters).

Directory: The directory to be used to store the project database tables (up to 255 characters). This directory can be on a local computer or a network server. The Select Directory button to the right of the directory name can be used to select an existing directory.

This option should be used to import projects that have been previously created but are not included in the Master Project database.

Managing a Project Database

WinLoG uses Microsoft Access databases to store all its Templates, Borehole Logs, Legends, Libraries, Projects, etc. In version 4 several new features have been added to make managing these databases easier and quicker. These are:

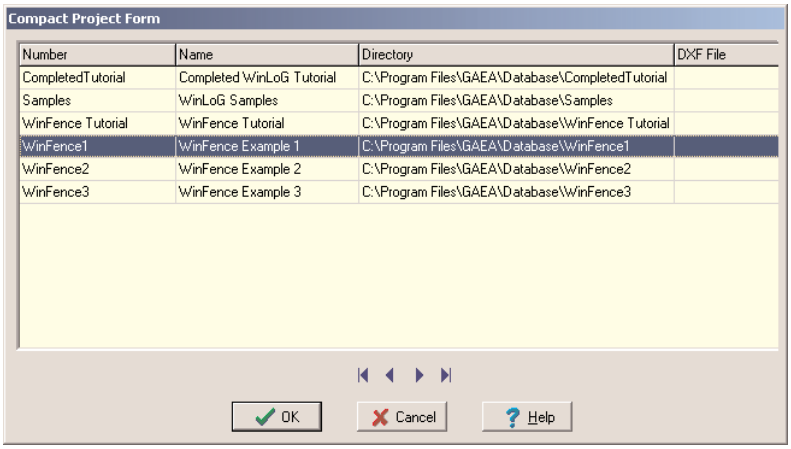
- Compressing a Database
- Repairing a Database
- Backing up a Database
- Restoring a Database
- Backing up all WinLoG Data

Compressing a Database

Compressing a WinLoG project database can be accomplished by selecting the Compact Project Database menu item from the Projects submenu of the File menu. The Compact Project Form on the next page will be displayed.

Tip

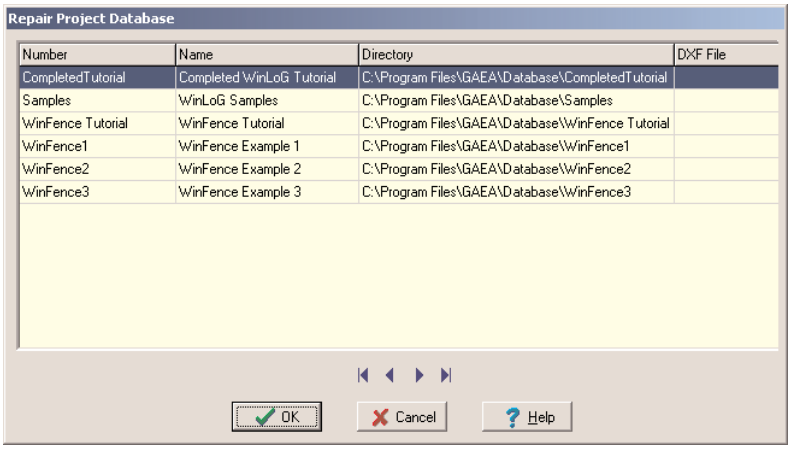
When you delete data or objects in a WinLoG database, the Access database associated with the project can become fragmented and use disk space inefficiently. Compacting the database makes a copy of the file and rearranges how the file is stored on your disk. Compacting optimizes the performance of the databases.



Select the project database you wish to compact and then press the Ok button.

Repairing a Database

It sometimes happens that a WinLoG project database might become un-usable because the MS Access database has become corrupted in some way. WinLoG has a feature which enables the user to repair the database. To repair a WinLoG Project Database select the Repair Project Database menu item from the Projects submenu of the File menu.

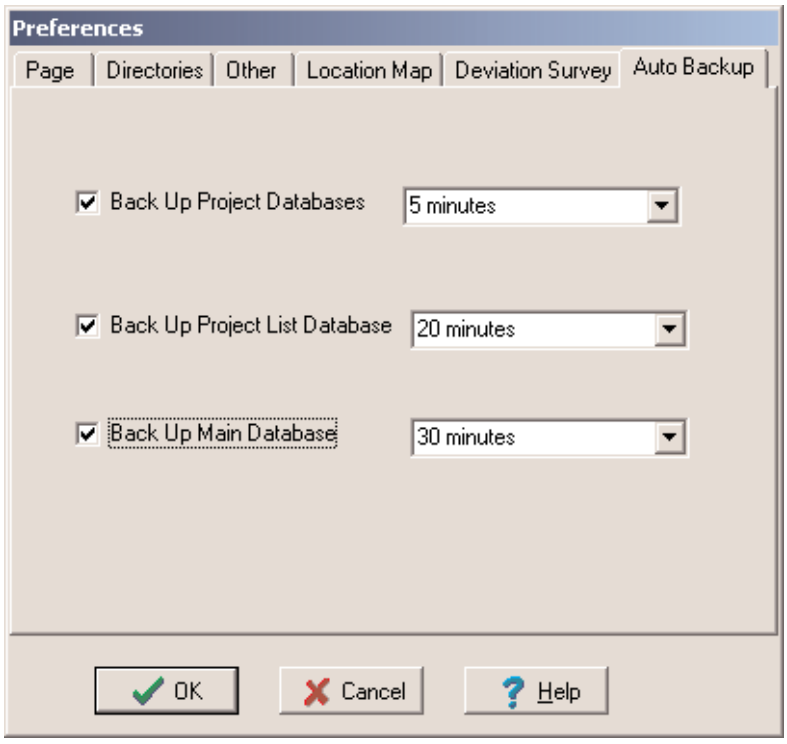


A confirmation message is then shown on the screen asking if the user is sure they would like to repair the project database. If the user selects Yes, then WinLoG will display the Repair Project Database form. Select the project database you wish to repair and press the Ok button.

Backing Up a Database

WinLoG version 4 has the ability to automatically backup all databases at regular intervals while the user is editing and creating new templates, logs, and projects.

You can decide how often you would like to backup your data. To set the time intervals between backups, select the Preferences menu item from the File menu.



On the Auto Backup tab you can set the following:

Back Up Project Database: If this checkbox is checked then the currently open project will be backed up at a regular interval.

Back Up Project List Database: If this checkbox is checked then the WinLoG project list database will be backed up at a regular interval defined by the combobox to the right of it. If this checkbox is not selected then the WinLoG project list database will not be backed up.

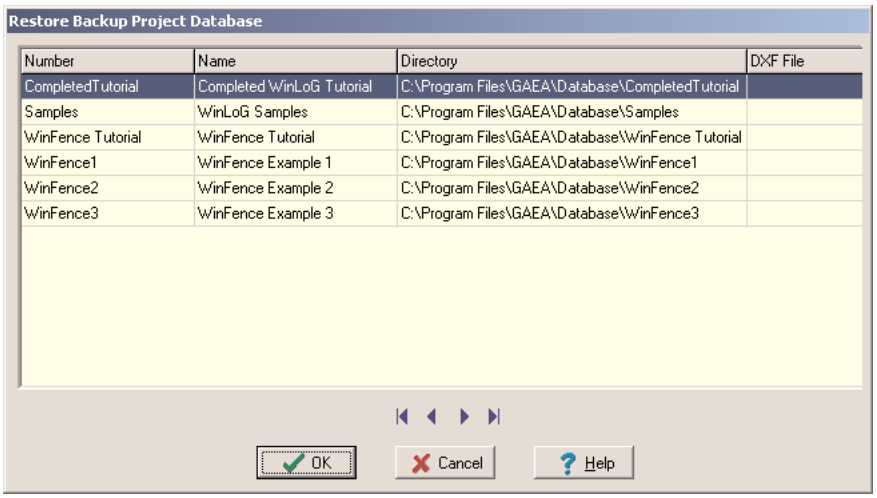
Back Up Main Database: If this checkbox is checked then the WinLoG main database will be backed up at a regular interval.

Restoring a Database

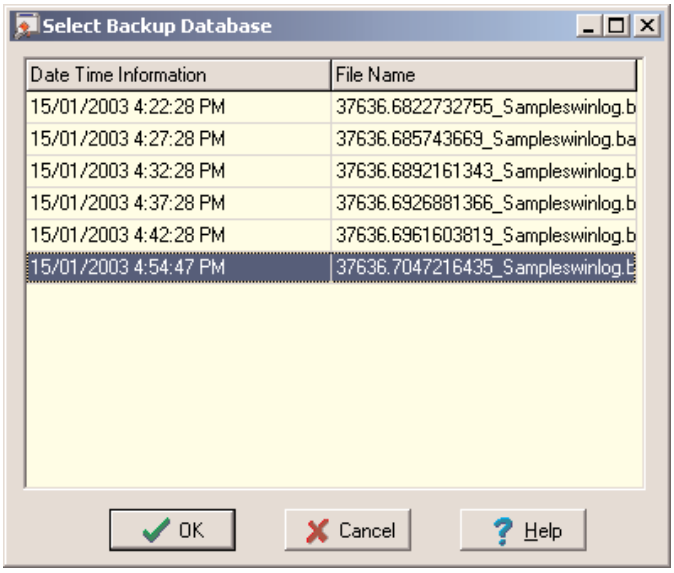
Restoration of a backed up WinLoG database is very simple. Select the Individual Project menu item from the Restore Backup Database submenu of the Projects submenu from the File menu. A confirmation message will be displayed, select Yes to continue, and the Restore Project Database Form will be displayed.

Restoring an Individual Project Database

When the Individual Project menu item is selected from the Restore Backup Database submenu, the Restore Individual Project Database form below will be displayed. This form allows you to select the project that your would like to restore.



After a project has been selected the Select Backup Database form below will be displayed. This form lists all the backup databases for an individual project. The date and time information indicates the date and exact time at which the project databases were backed up.



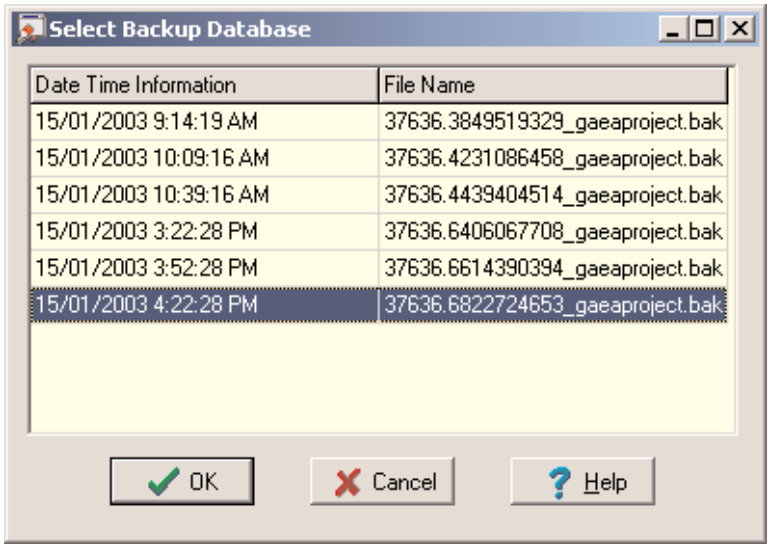
Select the database you wish to restore and then press the Ok button. The project database will then be restored.

Restoring the Project List Database

To restore a backup of the Project List Database select the Project List menu item from the Restore Backup Database submenu. A confirmation form will be displayed, select yes to continue and the Select Backup Database form on the next page will be displayed.

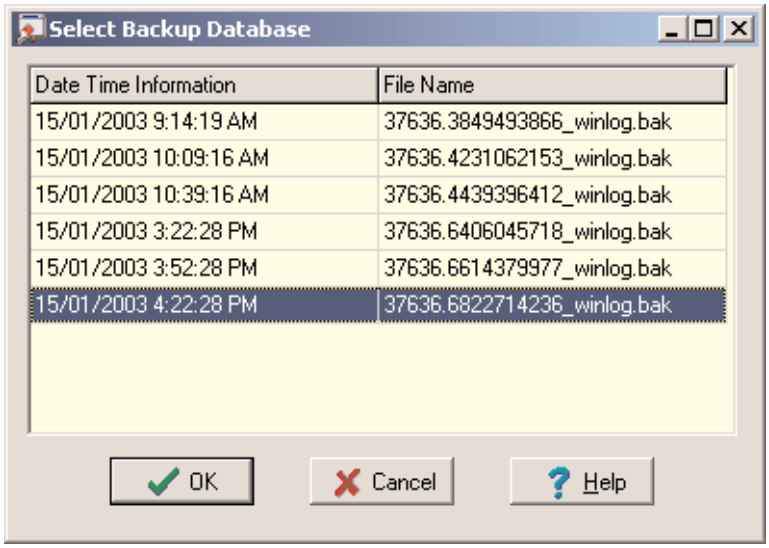
The Select Backup Database form lists all the backup databases for the project list database. The date time information indicates the date and exact time at which the project list database was backed up.

Select the database you wish to restore and then press the Ok button.



Restoring the Main Database

To restore a backup of the Main Database select the Main Database List menu item from the Restore Backup Database submenu of the Projects submenu from the File menu. A confirmation form will be displayed, select yes to continue and the Select Backup Database form below will be displayed.

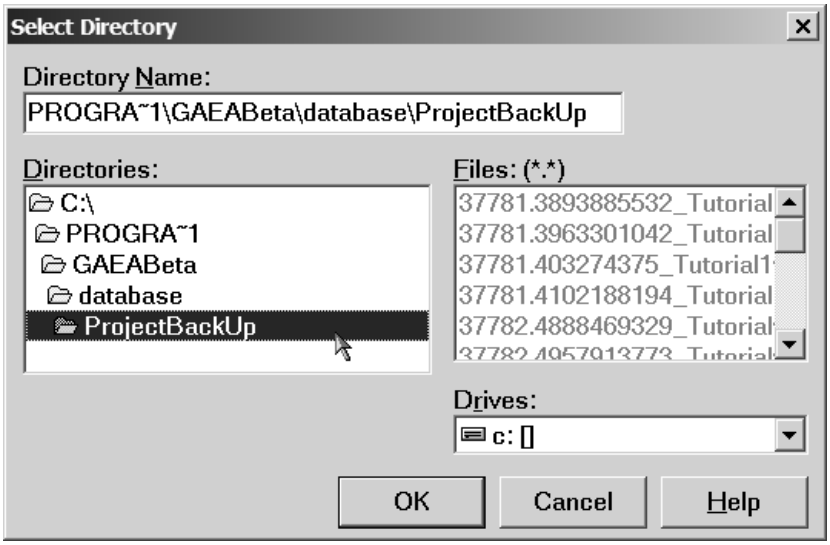


The Select Backup Database form lists all the backup databases for the main database. The date time information indicates the date and exact time at which the project list database was backed up. Select the database you wish to restore and then press the Ok button.

Backing Up All WinLoG Data

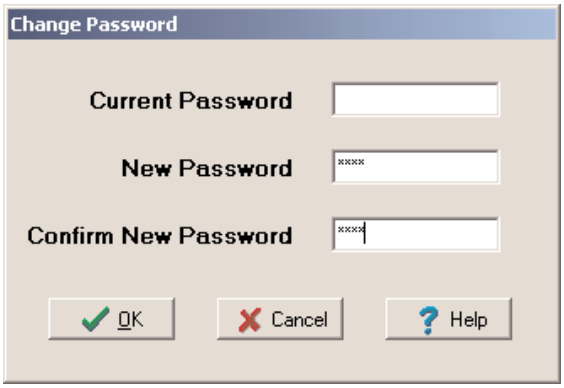
In addition to the auto-backups of the project databases and list databases. All of the WinLoG Data, including all databases, can be backed up. This feature is useful for creating an archive copy of the WinLoG data.

To backup all of the WinLoG data select the Backup WinLoG menu item from the File menu. The Select Directory form below will be displayed. Using this form select the directory where you would like the archive to be stored.



Setting Project Passwords

Project password locking is done by selecting the Change Password menu item from the Projects submenu of the File menu. This will open the Change Password form.



There are three editable fields on this form.

Current Password: The current password of the project. If the project doesn't currently have a password then leave this blank.

New Password: The new password of the project. If you want to remove the old password then set this to blank.

Confirm New Password: The new password again of the project. If you want to remove the old password then set this to blank.

Tip

It maybe advantageous for some companies to create Projects that have a password associated with them. In this way accidental editing or deleting of boreholes can be avoided since only employees knowing the password to the project would be able to open or edit it.

Opening a Password Locked Project

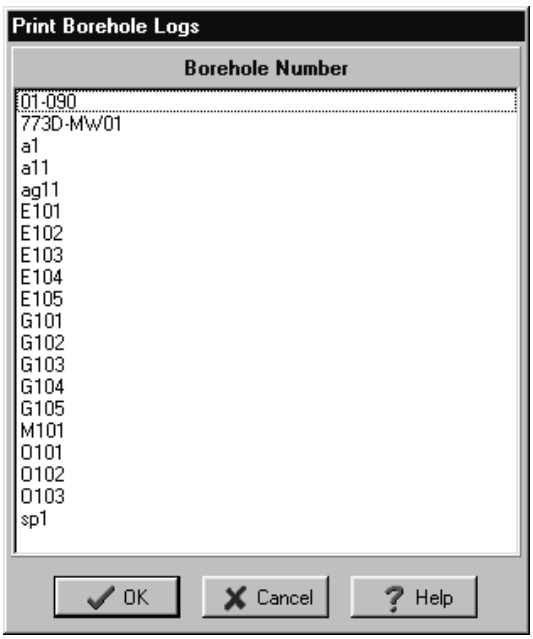
To open a project that has been password locked simply follow the same procedure as a user would normally follow to open a project. This will open up the Password form if the project is password locked, otherwise the project will open normally.

If the project is password locked, enter the password in the Password Text Box, and click OK**.** If the user enters the correct password they will be permitted to open the project, otherwise the project will not open for them.

Printing a Project

One or more of the borehole logs in a project can be printed by either selecting the Print menu item from the File menu, or pressing the Print button on the Project toolbar.

After the Print button or menu item has been pressed, the Print Borehole Logs form on the next page will be displayed. The arrow buttons at the bottom of the list can be used to move the selection to the start of the list, the previous record, the next record, or the end of the list.



A single borehole log can be selected by clicking on it and pressing the OK button. A range of borehole logs can be selected by clicking on the beginning of the range and then holding down the Shift key while clicking on the end of the range. Multiple logs can be selected by holding down the Ctrl key while clicking on the logs.

Importing and Exporting Data

Tip

When importing data it is possible to over-write existing data in the database if it has the same name. To avoid this the SaveAs button can be used to save the imported data as a new name.

WinLoG can import and export data for borehole logs, templates, legends, and libraries in a wide variety of formats. To import or export data select the Import / Export Data submenu from the File menu.

The following data formats can be imported:

- Version 1 and 2 WinLoG Data
- Version 3 and 4 WinLoG Exchange Files
- gINT Data
- AGS Data
- LogPlot Data
- GTGS Data

And the following data formats can be exported:

- Version 3 and 4 WinLoG Exchange Files
- Bitmap File
- Enhanced Metafile
- Windows Clipboard
- DXF File
- AGS File

The importing and exporting of these data formats are discussed in detail in the sections below.

Importing Version 1 and 2 WinLoG Data

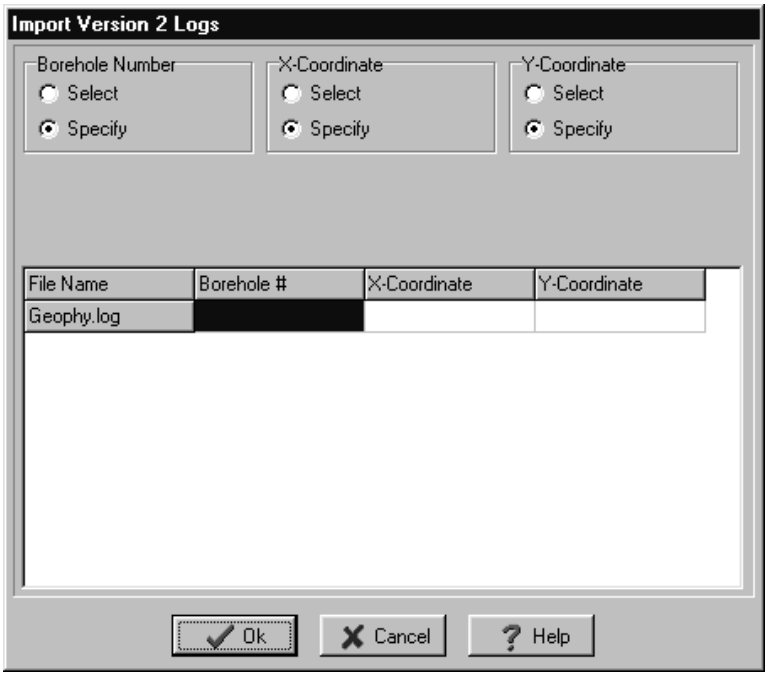
Borehole logs, templates, and legends from versions 1 and 2 of WinLoG can be imported by selecting the Import Version 2 Data submenu from the Import submenu of the Import/Export Data submenu. The borehole logs will be imported into the current project, if no project is currently opened then this option will be dimmed and unavailable. Templates and legends will be imported into the WinLoG Master Database, and will be available to all projects.

Borehole Logs

To import version 2 borehole logs into a project select the Logs menu item from the Import Version 2 Data submenu. The Import Version 2 Log Files form will be displayed as shown below.

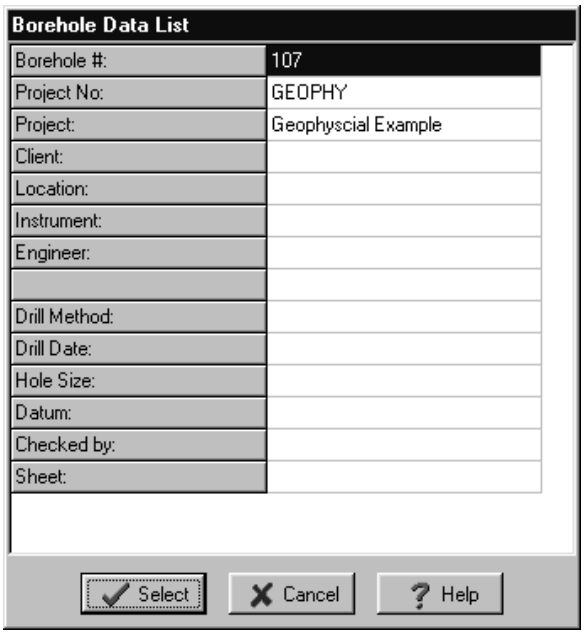
A single borehole log can be selected by clicking on it and pressing the Open button. A range of borehole logs can be selected by clicking on the beginning of the range and then holding down the Shift key while clicking on the end of the range. Multiple logs can be selected by holding down the Ctrl key while clicking on the logs.

After the Open button has been pressed the Import Version 2 Logs form will be displayed as shown on the next page.



The purpose of this form is to get the unique Borehole Number, X-Coordinate, and Y-Coordinate of the imported logs so that they can be properly stored in the database. This information can be selected from the headers of the logs or be entered in the table for each log. The X and Y Coordinates are used primarily by other applications and may be left blank.

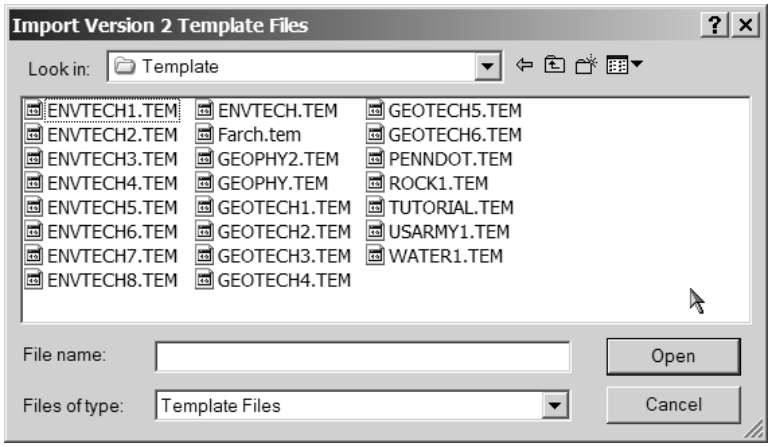
If the information is to be selected from the borehole logs as shown above, a Select button will appear below the data type. This button should be pressed to select which field in the borehole logs has the desired data (in this case the borehole number). A Borehole Data List form shown on the next page will be displayed listing the fields contained in the borehole logs. This field list is derived from the header and footer fields in the template of the first borehole log, and the headers and footers of the first borehole log. The desired field (Borehole Number in this case) should be selected and then the Select button pressed.



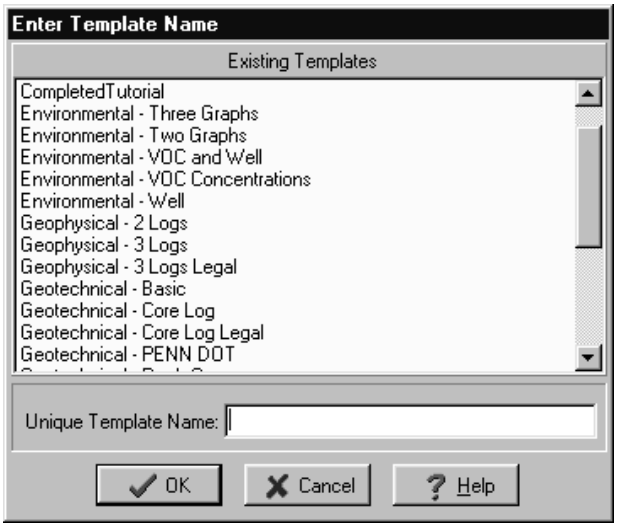
After the Ok button of the Import Version 2 Logs form has been pressed, the logs will be imported into the project. During the importation, the program will check to make sure that the Borehole Numbers specified are unique. If the Borehole Number is not unique, you will be asked for a unique borehole number.

Templates

To import version 2 templates into the WinLoG Master Database select the Templates menu item from the Import Version 2 Data submenu. The Import Version 2 Template Files form on the next page will then be displayed. Only one template at a time can be imported into the master database. Select a template and then press the Open button.

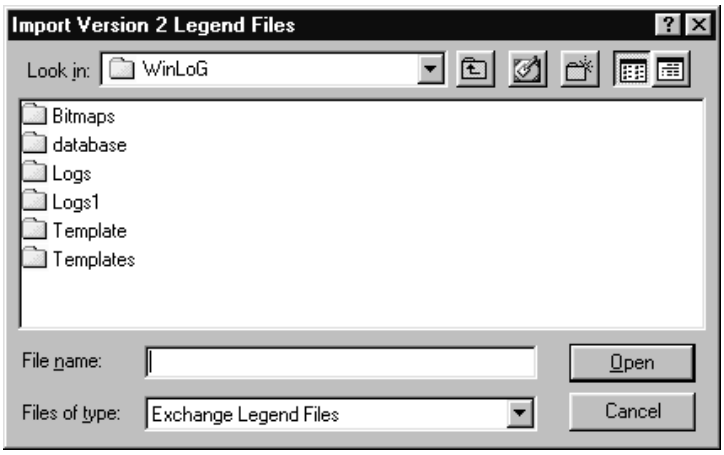


The Enter Template Name form shown below will be displayed when the template is saved. Enter a unique template name (not currently in the database) and press the Ok button. The program will provide a default name based on the filename.

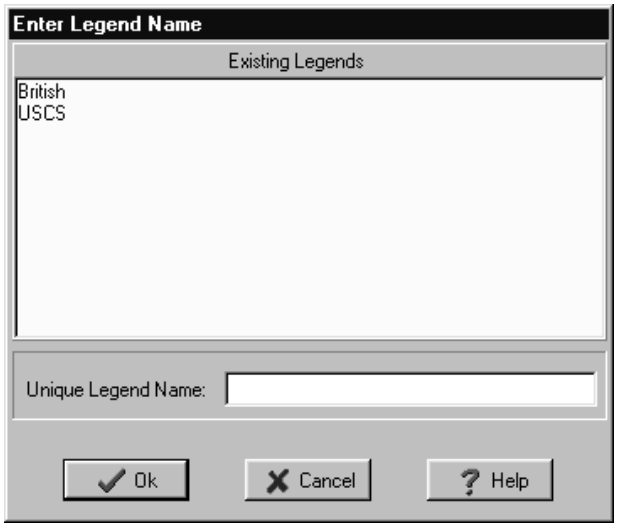


Legends

To import version 2 legends into the WinLoG Master Database select the Legends menu item from the Import Version 2 Data submenu. The Import Version 2 Legend Files form will then be displayed as shown below. Only one legend at a time can be imported into the master database. Select a legend and then press the Open button.



The Enter Legend Name form below will be displayed, showing the current legends in the master database. Enter a unique legend name (not currently in the database) and press the Ok button. The program will provide a default name based on the filename.



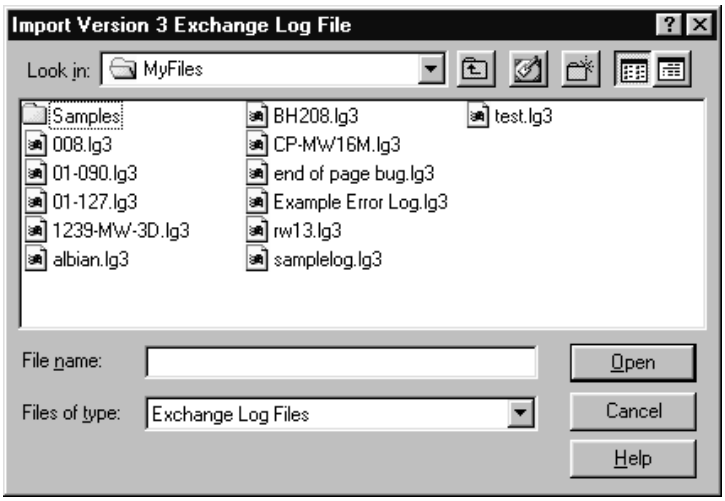
The legend will then be imported into the master database and opened for editing on the screen. If you do not wish to edit the legend use the Close button on the Legend toolbar.

Importing Version 3 and 4 Exchange Files

Exchange files are used to transfer borehole logs, templates, libraries and legends between projects or to other companies. Version 3 and 4 exchange files are very similar and the method to import them is identical. The data in these files is stored as ASCII text in a similar format to version1 and 2 files. After the data has been exported from another project, it can then be imported into the current project.

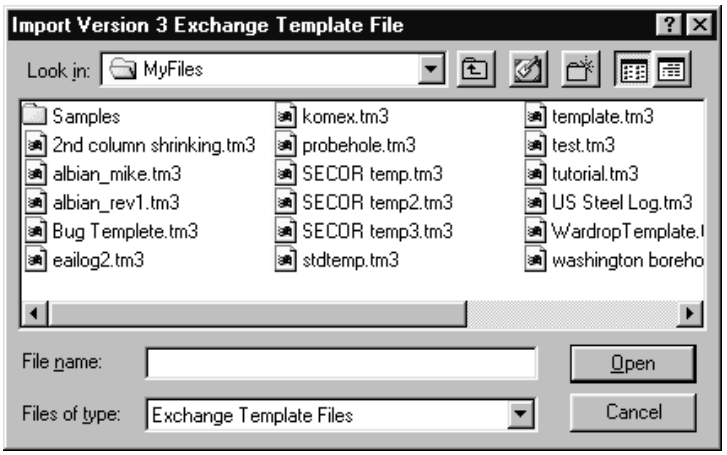
Borehole Logs

Before importing a borehole log exchange file, the project where the exchange file is going to be stored must be opened. To import a borehole log that is stored in exchange file format, select the Log menu item from either the Import Version 3 Data or Import Version 4 Data submenus from the Import submenu of the Import/Export Data submenu. The Import Exchange Log File form below will be displayed. Select the log file that you would like to import and then press the Open button. All borehole log exchange files have the extension ".lg3" for version 3 files and ".lg4" for version 4 files..



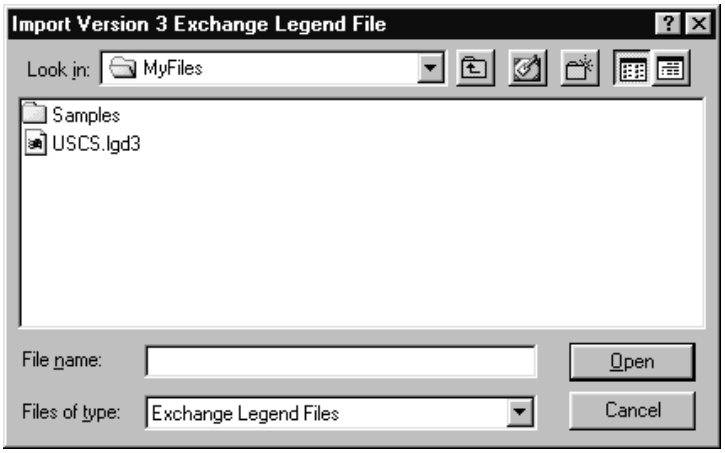
Templates

Since templates are not associated with any project, you do not to have a project opened to import a template. To import a template that is stored in exchange file format, select the Template menu item from either the Import Version 3 Data or Import Version 4 Data submenus from the Import submenu of the Import/Export Data submenu. The Import Exchange Template File form below will be displayed. Select the template file that you would like to import and then press the Open button. All template exchange files have the extension ".tm3" for version 3 files and ".tm4" for version 4 files.



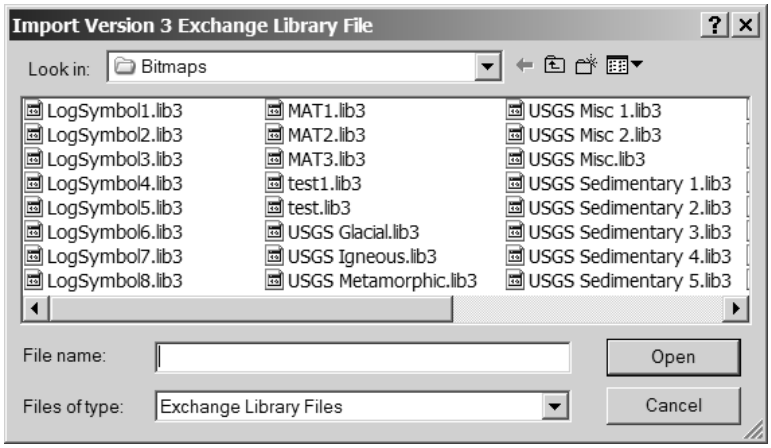
Legends

Since legends are not associated with any project, you do not to have a project opened to import a legend. To import a legend that is stored in exchange file format, select the Legend menu item from either the Import Version 3 Data or Import Version 4 Data submenus from the Import submenu. The Import Exchange Legend File form on the next page will be displayed. Select the legend file that you would like to import and then press the Open button. All legend exchange files have the extension ".lgd3" for version 3 files and ".lgd4" for version 4 files.



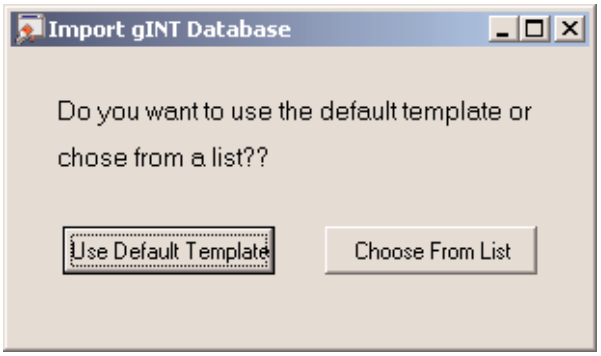
Libraries

Since libraries are not associated with any project, you do not to have a project opened to import a library. To import a library that is stored in exchange file format, select the Library menu item from either the Import Version 3 Data or Import Version 4 Data submenus from the Import submenu. The Import Exchange Library File form below will be displayed. Select the library file that you would like to import and then press the Open button. All library exchange files have the extension ".lib3" for version 3 files and ".lib4" for version 4 files.



Importing gINT Data

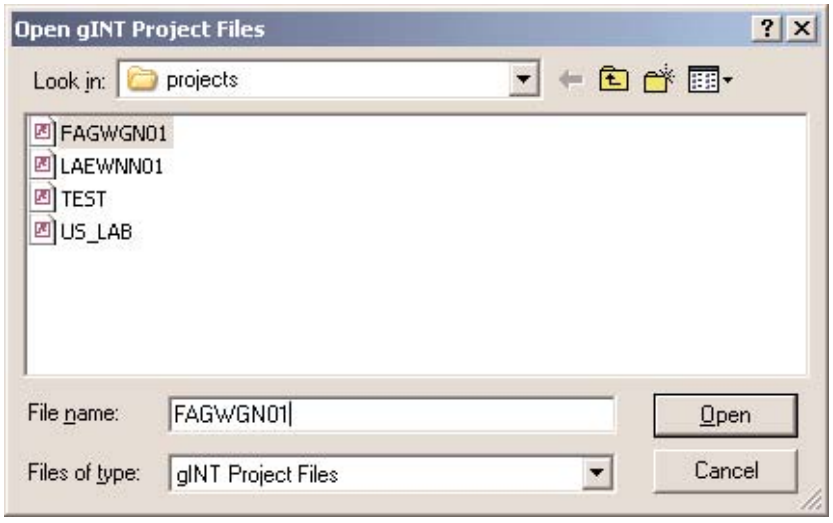
To import a gINT project into Winlog select the Import gINT menu item from the Import submenu of the Import/Export Data submenu. This will display the Import gINT Database form shown below.



The Import gINT Database form has two options:

- Use Default Template
- Choose From List

The Use Default Template option will create a default template for the gINT project. And the Choose From List option will allow you to select the template from a list of available templates. Each of these options are discussed in the sections below.



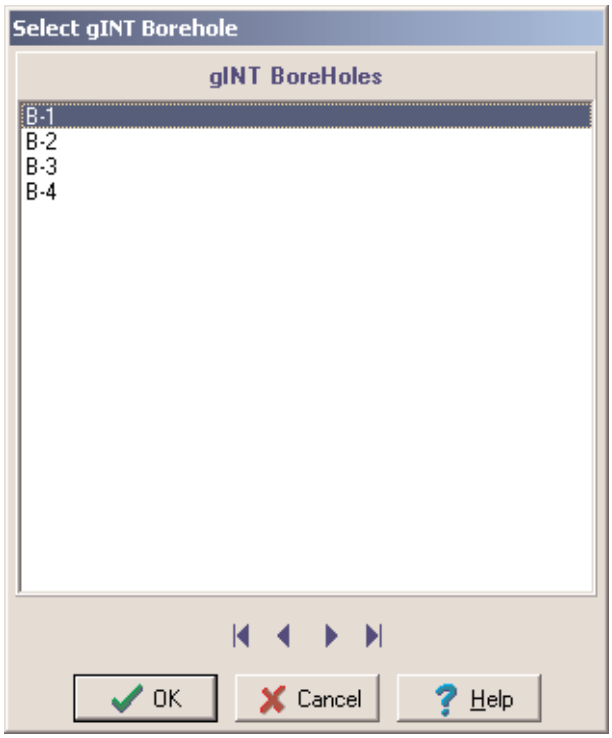
New

In version 4, WinLoG can import gINT project files. We have provided this feature as a means of letting users convert their gINT data over to WinLoG.

After one of the options are selected on the Import gINT Database form, the Open gINT Project File form, shown on the previous page, will be displayed. The Open gINT Project File is used to select and open the gINT Project file to Import.

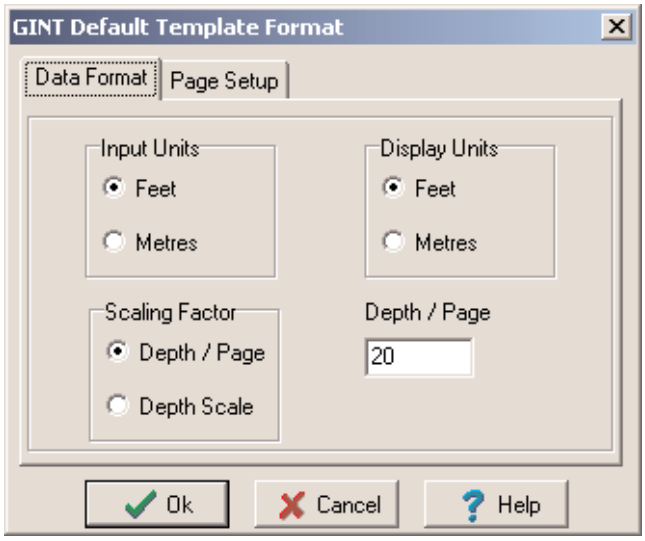
When the gINT project has been selected the Select gINT Borehole form below will be displayed. The Select gINT Borehole form displays a list of all the boreholes that are available in the gINT Project. The user has the option to select one or more boreholes to import at a time.

A single borehole can be imported by left clicking on a borehole and clicking OK. Multiple boreholes can be imported at once by holding down the Ctrl key and then clicking on multiple boreholes with the mouse. Then click OK to import the boreholes.



Use Default Template Option

If the Use Default Template option was selected previously, the gINT Default Template Format form below will be displayed after the boreholes to import are selected. This form has two tabs, one for Data Format and one for Page Setup.



Data Format Tab

The following information can be entered on the Data Format tab:

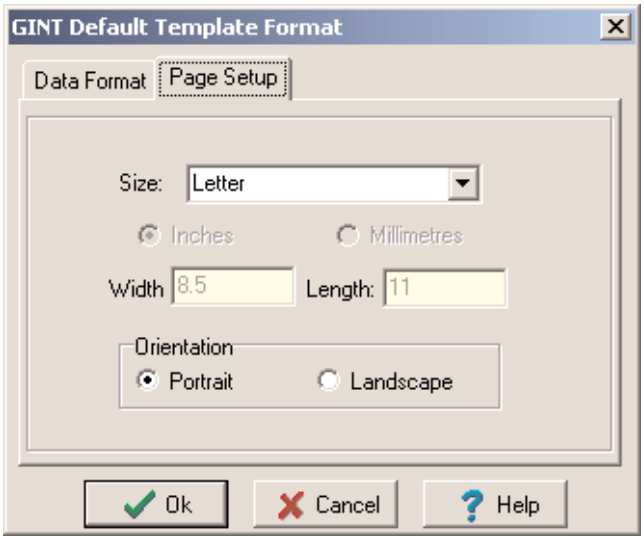
Input Units: The user can select to have the input units as either feet or metres.

Output Units: The user can select to have the output units as either feet or metres.

Scaling Factor: The user can select either to scale the template / Log as either Depth / Page or by using a depth scale.

Depth / Page: If the Scaling Factor is Depth/Page then the Depth/Page field will be displayed. This value scales the template / log as a number of metres per page. For example if this value is 20, then there will be 20 metres per page on the log(right).

1 to ___: If the Scaling Factor is Depth Scale then the 1 to ___ field will be displayed. This would allow the depth scale to 1m on screen is equal to ___ metres in real life.



Page Setup Tab

The following information can be entered on the Page Setup tab:

Size: This is the page size of the template. When the arrow at the right is pressed, a list of available page sizes is displayed.

Inches or Millimeters: The units for the width and length of the page. These units will be used when specifying the layout of the legend. If the Page Size is "Custom", the units can be set to either inches or millimeters.

Custom Width: If the page size is specified as "custom", the page horizontal width in inches must be specified.

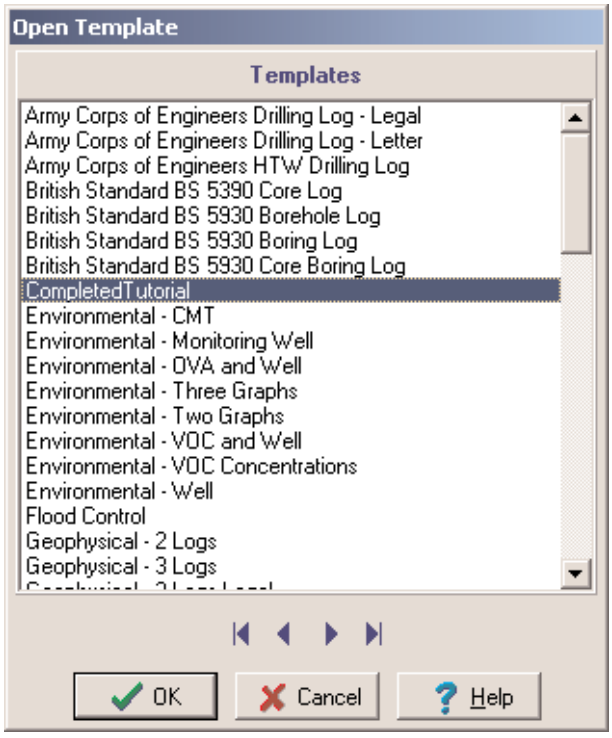
Custom Length: If the page size is specified as "custom", the page vertical length in inches must be specified.

Orientation: This is the orientation of the page; either portrait (longer side is vertical) or landscape (longer side is horizontal).

When the Ok button is pressed the new template will be displayed on the screen. Then, the imported logs should open up on the screen.

Choose From List Option

If Choose From List option was previously selected on the Import gINT Database form then the Open Template form below will be displayed. The Open Template form allows the user to select a Template to use for importing the gINT boreholes. Select the template to use from the list and then click the Ok button.


Open Template
Templates
Army Corps of Engineers Drilling Log - Legal
Army Corps of Engineers Drilling Log - Letter
Army Corps of Engineers HTW Drilling Log
British Standard BS 5390 Core Log
British Standard BS 5930 Borehole Log
British Standard BS 5930 Boring Log
British Standard BS 5930 Core Boring Log
CompletedTutorial
Environmental - CMT
Environmental - Monitoring Well
Environmental - OVA and Well
Environmental - Three Graphs
Environmental - Two Graphs
Environmental - VOC and Well
Environmental - VOC Concentrations
Environmental - Well
Flood Control
Geophysical - 2 Logs
Geophysical - 3 Logs
OK
Cancel
Help

Importing AGS Data

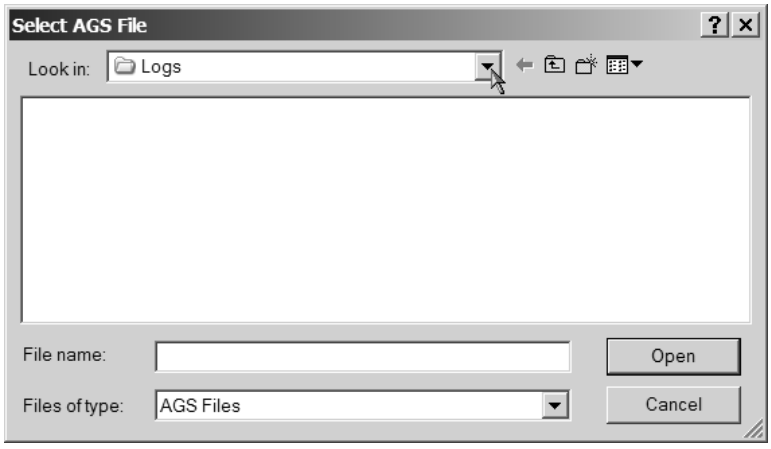
In version 4, Winlog allows a user to import AGS files. The AGS file format is the standard file format of the the Association of Geotechnical and Geoenvironmental Specialists (AGS) which is a non-profit association established to improve the profile and quality of geotechnical and geoenvironmental engineering. Their web site is located at:

http://www.ags.org.uk/data transfer/Intro.cfm

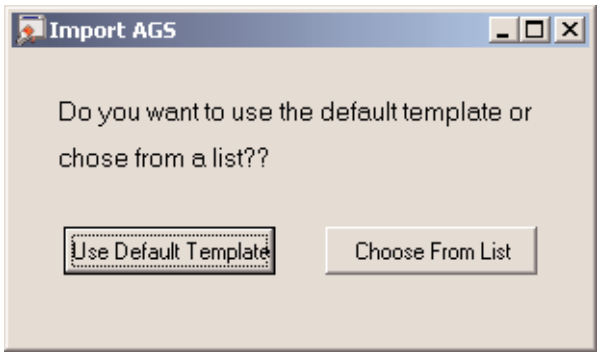
The membership comprises UK organizations and individuals having a common interest in the business of site investigation, geotechnics, geoenvironmental engineering, engineering geology, geochemistry, hydrogeology, and other related disciplines.

The purpose of the AGS Format is to provide a means of transferring geotechnical and geoenvironmental data between parties. In order to ensure the widest possible level of acceptance it was also agreed that the Format should use the American Standard Code for Information Interchange (ASCII).

To import as AGS file into Winlog select the Import AGS Data menu item from the Import submenu of the Import/Export Data submenu of the File menu. The Select AGS File form below will be displayed allowing the user to select and open the AGS file they wish to Import.



After the file name has been selected, the file is automatically processed. If the file is a valid AGS file it should be successfully read and the user should get a message indicating that the file has been read properly. If however, there was a problem then the user should get a message indicating that Winlog could not read the file.



If the read is successful, then winlog will open the Import AGS form shown above. There are two options:

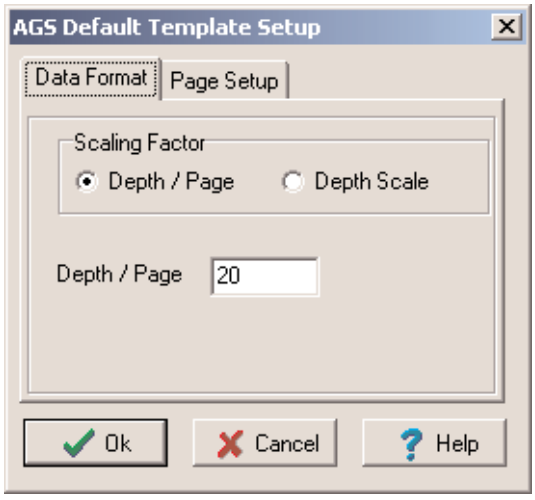
- Use Default Template
- Choose From List

The Use Default Template option will create a default template for the borehole logs. And the Choose From List option will allow you to select the template from a list of available templates. Each of these options are discussed in the sections below.

After an option has been selected, the Select AGS Borehole form on the next page will be displayed. The Select AGS Borehole form displays the list of all boreholes that are available for importing from the AGS file the users wants to import. The user has the option to select one or more boreholes to import at a time. The user can select a single borehole by left clicking on a borehole and clicking OK. To select multiple boreholes, the user must hold down the Ctrl key and click on multiple boreholes.

Use Default Template Option

If the user previously selected to the Use Default Template option, the AGS Default Template Setup form will be displayed after the boreholes to import have been selected. This form has two tabs, the Data Format tab and the Page Setup tab.



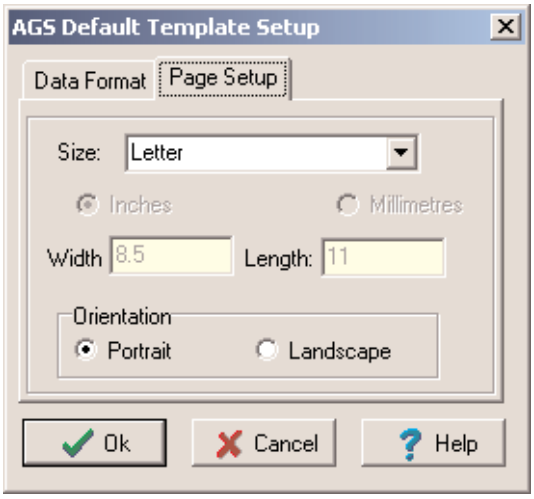
Data Format Tab

The following information can be entered on the Data Format tab:

Scaling Factor: The user can select either to scale the template / Log as either Depth / Page or by using a depth scale.

Depth / Page: If Depth/Page is selected for the Scaling Factor, then the Depth/Page field will be displayed. This value scales the template / log as a number of metres per page. For example if this value is 20, then there will be 20 metres per page on the log(right).

1 to ___: If Depth Scale is selected for the Scaling Factor, then the 1 to ___ field will be displayed. This would allow the depth scale to 1m on screen is equal to ___ metres in real life.



Page Setup Tab

The following information can be entered on the Page Setup tab:

Size: This is the page size of the template. When the arrow at the right is pressed, a list of available page sizes is displayed.

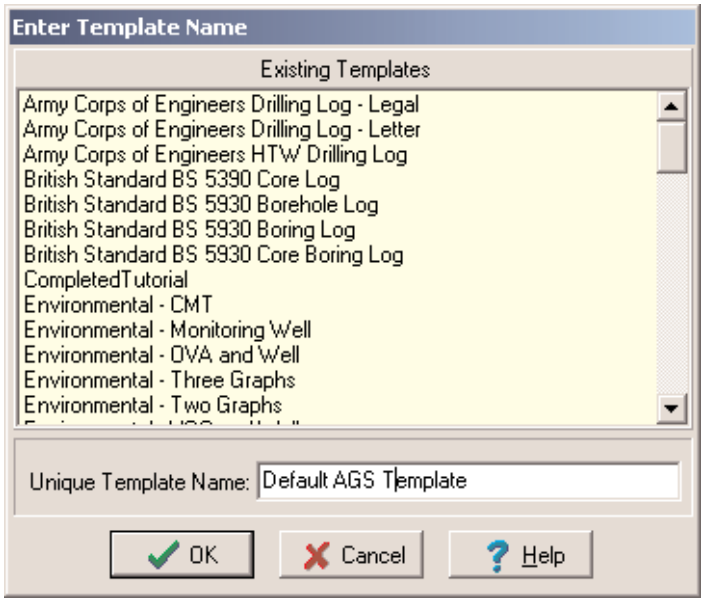
Inches or Millimeters: The units for the width and length of the page. These units will be used when specifying the layout of the legend. If the Page Size is "Custom", the units can be set to either inches or millimeters.

Custom Width: If the page size is specified as "custom", the page horizontal width in inches must be specified.

Custom Length: If the page size is specified as "custom", the page vertical length in inches must be specified.

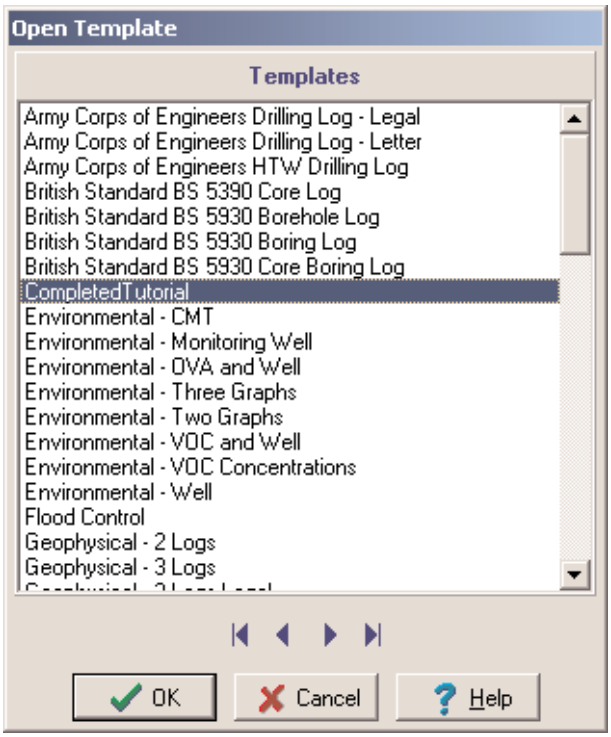
Orientation: This is the orientation of the page; either portrait (longer side is vertical) or landscape (longer side is horizontal).

After the Ok button is pressed the new template will be displayed. When this template is saved the Enter Template Name form below will be displayed. This form shows the current templates in the database. To save the template, enter a unique name for the new template and press the Ok button.


Enter Template Name
Existing Templates
Army Corps of Engineers Drilling Log - Legal
Army Corps of Engineers Drilling Log - Letter
Army Corps of Engineers HTW Drilling Log
British Standard BS 5390 Core Log
British Standard BS 5930 Borehole Log
British Standard BS 5930 Boring Log
British Standard BS 5930 Core Boring Log
CompletedTutorial
Environmental - CMT
Environmental - Monitoring Well
Environmental - OVA and Well
Environmental - Three Graphs
Environmental - Two Graphs
Unique Template Name:
Default AGS Template
OK
Cancel
Help

Choose from List Option

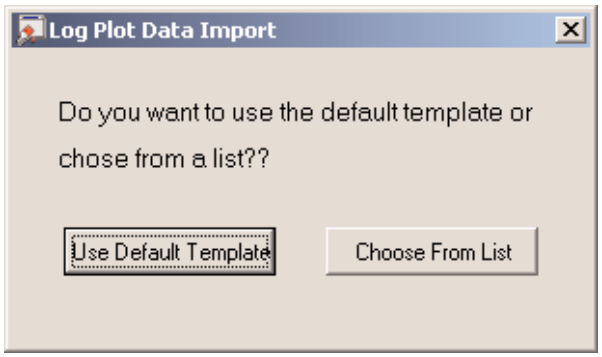
If the user previously selected Choose From List, the Open Template form below will be displayed after the boreholes are selected. The Open Template form allows the user to select a Template to use for opening the AGS data borehole.


Open Template
Templates
Army Corps of Engineers Drilling Log - Legal
Army Corps of Engineers Drilling Log - Letter
Army Corps of Engineers HTW Drilling Log
British Standard BS 5390 Core Log
British Standard BS 5930 Borehole Log
British Standard BS 5930 Boring Log
British Standard BS 5930 Core Boring Log
CompletedTutorial
Environmental - CMT
Environmental - Monitoring Well
Environmental - OVA and Well
Environmental - Three Graphs
Environmental - Two Graphs
Environmental - VOC and Well
Environmental - VOC Concentrations
Environmental - Well
Flood Control
Geophysical - 2 Logs
Geophysical - 3 Logs
OK
Cancel
Help

Select the template to use and then click on the Ok button. The boreholes will then be imported from the AGS file.

Importing LogPlot Data

Version 4 of WinLoG is now able to import LogPlot files. We have provided this feature as a means of letting users convert their LogPlot data over to WinLoG. To import a LogPlot file select the Import LogPlot Data menu item from the Import submenu of the Import/Export Data submenu. This will display the LogPlot Data Import form below.

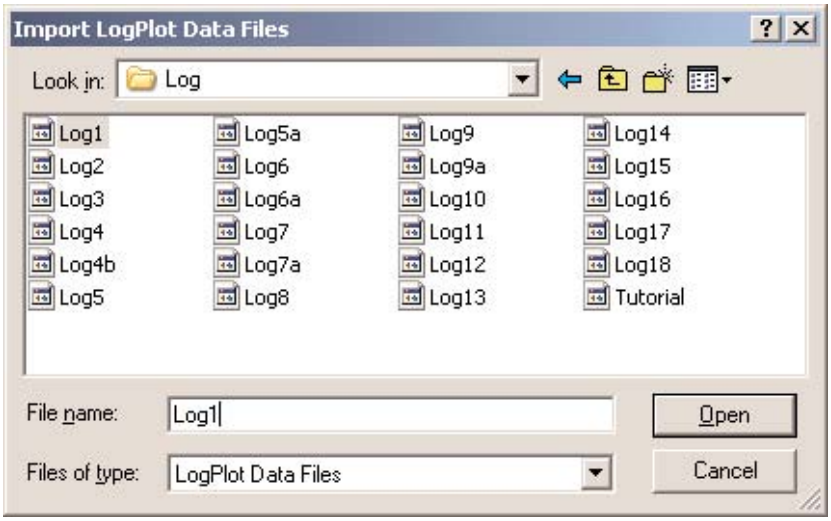


The LogPlot Data Import form has two options:

- Use Default Template
- Choose From List

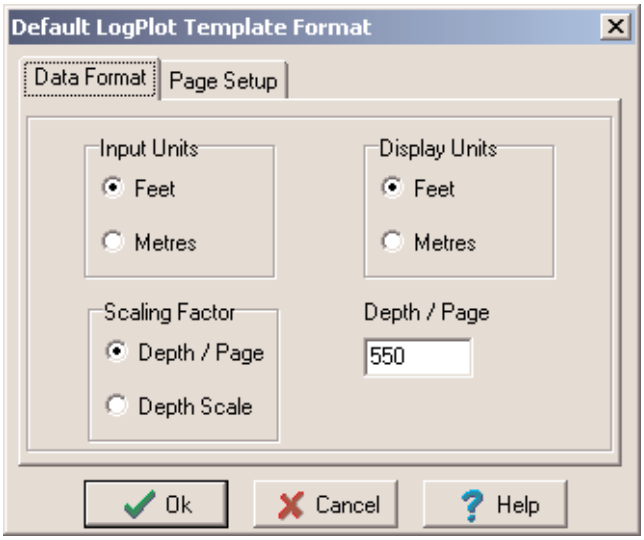
The Use Default Template option will create a default template based on the LogPlot file you are importing. And the Choose From List option will allow you to select the template from a list of available templates. Both of these are options are discussed in the sections below.

After an option has been selected, the Import LogPlot Data form on the next page will be displayed. The Import LogPlot Data Files form allows the user to select and open the LogPlot file they wish to Import. Select the file you wish to import and then click on the Open button.



Use Default Template Option

If you selected to Use a Default Template previously, the Default LogPlot Template Format form below will be displayed after you select the LogPlot file to import. This form has two tabs, one for the Data Format and one for the Page Setup.



Data Format Tab

The following information can be entered on the Data Format tab:

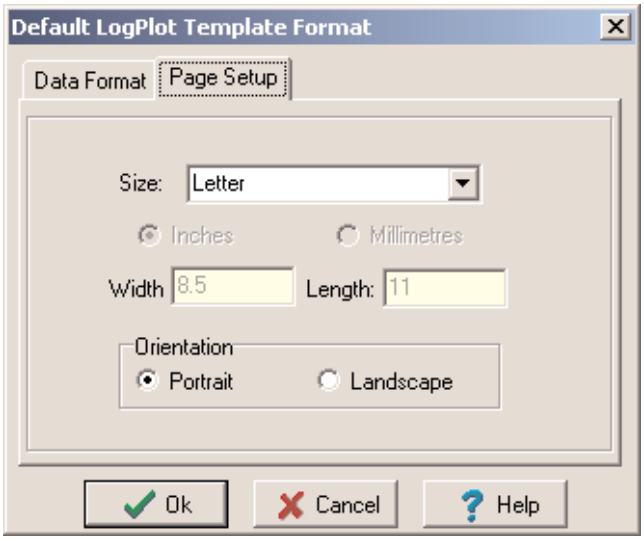
Input Units: The user can select to have the input units as either feet or metres.

Output Units: The user can select to have the output units as either feet or metres.

Scaling Factor: The user can select either to scale the template / Log as either Depth / Page or by using a depth scale.

Depth / Page: If Depth/Page is selected for the Scaling Factor then the Depth/Page field will be displayed. This value scales the template / log as a number of metres per page.

1 to ___: If Depth Scale is selected for the Scaling Factor then the 1 to __ field will be displayed. This would allow the depth scale to 1m on screen is equal to ___ metres in real life.



Page Setup Tab

The following information can be entered on the Page Setup tab:

Size: This is the page size of the template. When the arrow at the right is pressed, a list of available page sizes is displayed.

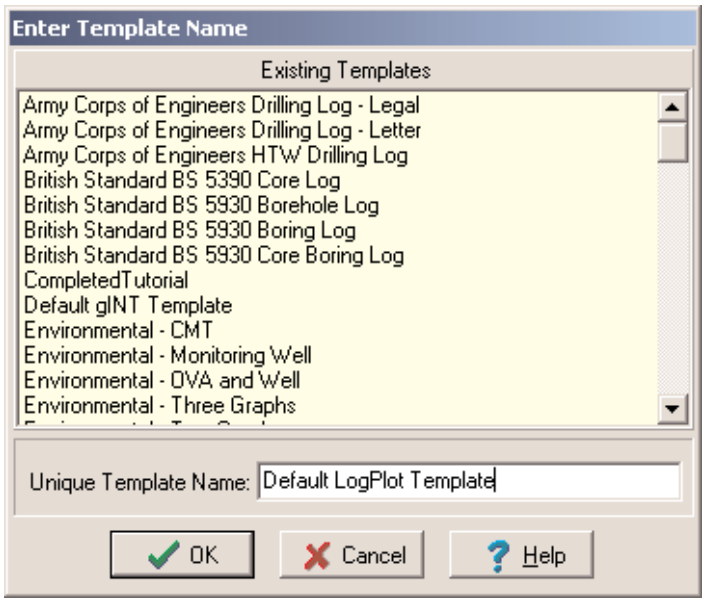
Inches or Millimeters: The units for the width and length of the page. These units will be used when specifying the layout of the legend. If the Page Size is "Custom", the units can be set to either inches or millimeters.

Custom Width: If the page size is specified as "custom", the page horizontal width in inches must be specified.

Custom Length: If the page size is specified as "custom", the page vertical length in inches must be specified.

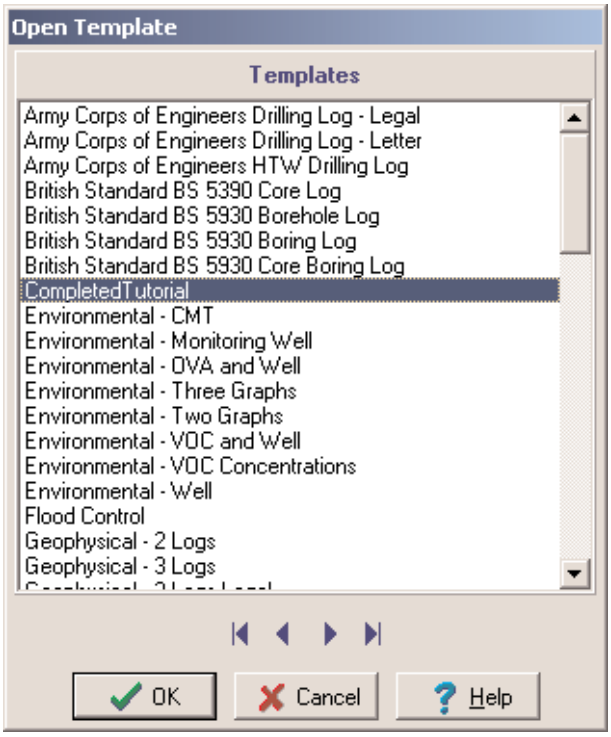
Orientation: This is the orientation of the page; either portrait (longer side is vertical) or landscape (longer side is horizontal).

When this template is saved the Enter Template Name form below will be displayed. This form shows the current templates in the database. To save the template, enter a unique name for the new template and press the Ok button.


Enter Template Name
Existing Templates
Army Corps of Engineers Drilling Log - Legal
Army Corps of Engineers Drilling Log - Letter
Army Corps of Engineers HTW Drilling Log
British Standard BS 5390 Core Log
British Standard BS 5930 Borehole Log
British Standard BS 5930 Boring Log
British Standard BS 5930 Core Boring Log
CompletedTutorial
Default gINT Template
Environmental - CMT
Environmental - Monitoring Well
Environmental - OVA and Well
Environmental - Three Graphs
Unique Template Name:
Default LogPlot Template
OK
Cancel
Help

Choose From List Option

If previously the Choose From List option was selected, the Open Template form below will be displayed after the LogPlot file has been selected. The Open Template form allows the user to select a Template to use for importing the LogPlot file. Select the template to use from the list and then press the Ok button.

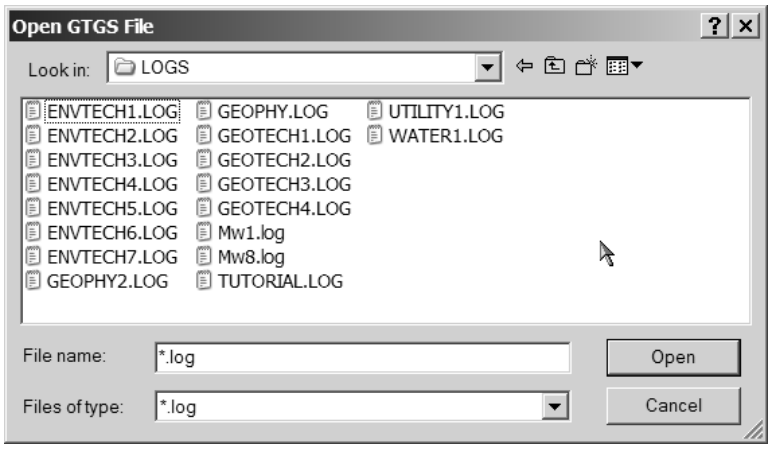

Open Template
Templates
Army Corps of Engineers Drilling Log - Legal
Army Corps of Engineers Drilling Log - Letter
Army Corps of Engineers HTW Drilling Log
British Standard BS 5390 Core Log
British Standard BS 5930 Borehole Log
British Standard BS 5930 Boring Log
British Standard BS 5930 Core Boring Log
CompletedTutorial
Environmental - CMT
Environmental - Monitoring Well
Environmental - OVA and Well
Environmental - Three Graphs
Environmental - Two Graphs
Environmental - VOC and Well
Environmental - VOC Concentrations
Environmental - Well
Flood Control
Geophysical - 2 Logs
Geophysical - 3 Logs
OK
Cancel
Help

Importing GTGS Data

In version 4 of WinLoG, you can now import GTGS data and templates. Both version 3 and version 5 GTGS data can be imported.

Importing GTGS Version 3 Data

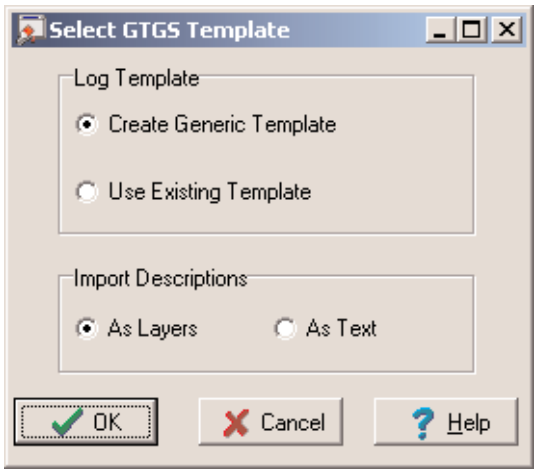
Only log data can be imported from GTGS version 3 data, the template will be created by WinLoG or can be selected from a list of existing templates. To import GTGS version 3 data select the Version 3 menu item from the Import GTGS Data submenu of the Import submenu. The Open GTGS File form below will then be displayed. Select the file you wish to import and then press the Open button.



After the GTGS file has been selected the Select GTGS Template form on the next page will be displayed. This form allows the user to select the template they would like to use to display the GTGS data. There are two options:

1) Create Generic Template
The user can select to have WinLoG create a default template for them that is based on the imported GTGS file.

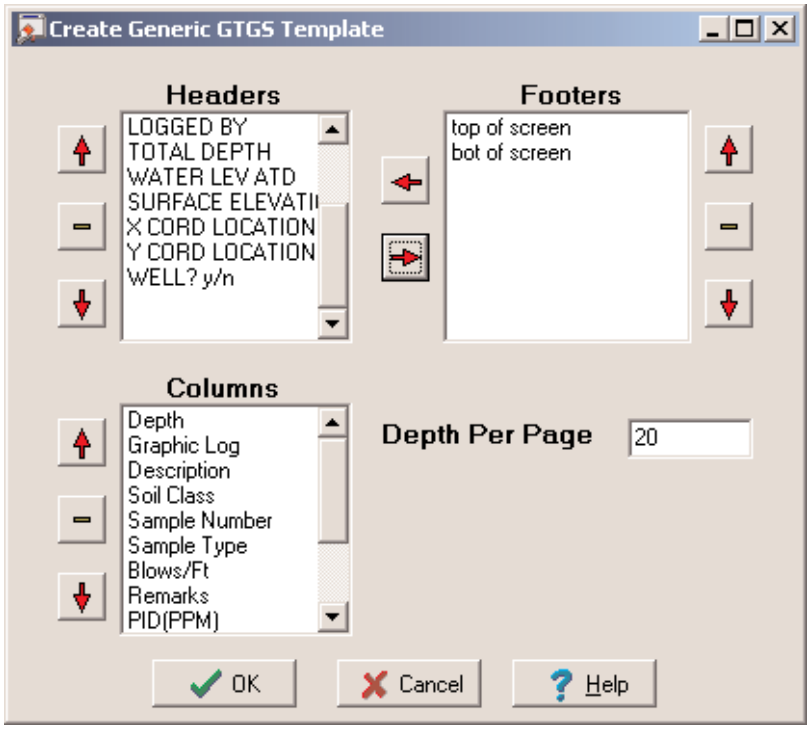
2) Use Existing Template
The user can select to use an existing template that they can choose from the list of WinLoG's available templates.



In addition, the user has the option to Import Descriptions as Layers or as Text.

Create Generic Template Option

If the user selects Create Generic Template option then the Create Generic GTGS Template form below will be displayed.



This form allows the user to create a template based on the data that has been extracted from the GTGS Version 3 file.

The following can be edited on this form:

Headers: This list box contains the list of all headers that were found in the imported GTGS file.

Footers: This list box contains the list of all footers that were found in the imported GTGS file.

Columns: This list box contains the list of all columns that were found in the imported GTGS file.

Depth Per Page: This is the default Depth Per Page that is used when WinLoG creates the template.Usually in feet per page.

Clicking on the **Up Arrow** button will move the selection up one level in the list box.

Clicking on the **Down Arrow** button will move the selection down one level in the list box.

Clicking the **Delete** button will delete the selection from the list box.

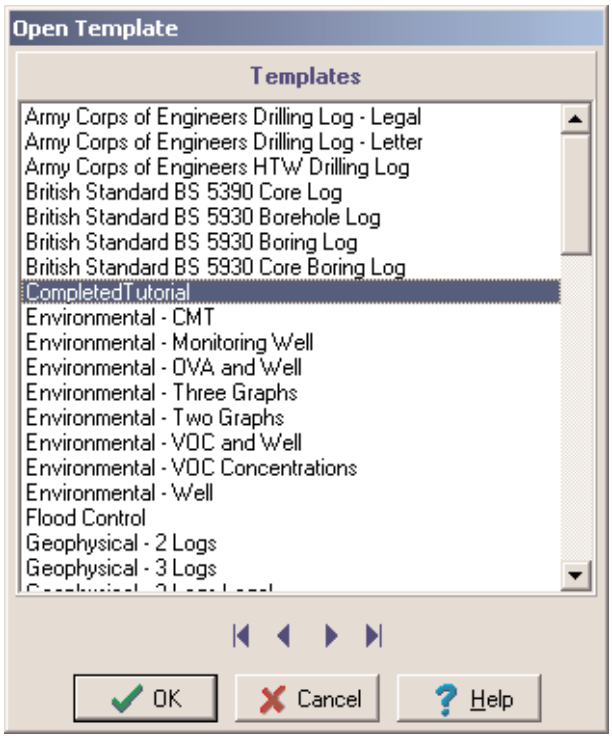
Clicking the **Left Arrow** button will move the selected footer item from the footer list box and over to the top of the header list box.

Clicking the **Right Arrow** button will move the selected header item from the header list box and over to the top of the footer list box.

After the Ok button is pressed the Enter Template Name form will be displayed. In this form you can specify the name to save the Generic Template as.

Use Existing Template Option

If the Use Existing Template option was selected previously, the Open Template form below will be displayed. This form allows the user to select a template to use for importing the GTGS dataset. This template can be one that was created when importing previous GTGS datasets, that has been modified to suit your needs. Select the template you wish to use and then press th Ok button.

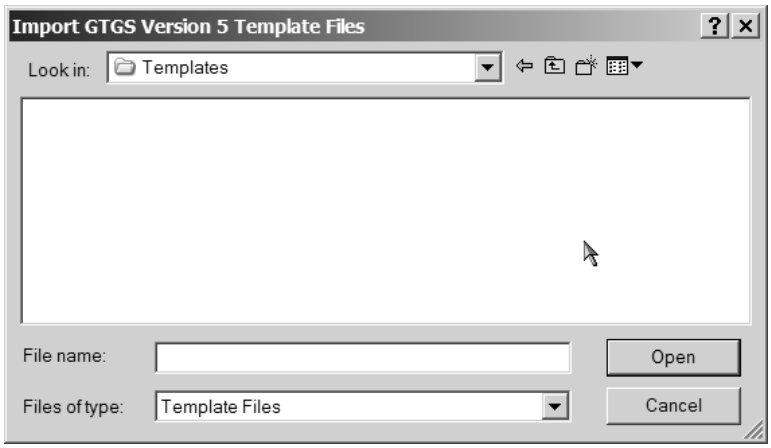

Open Template
Templates
Army Corps of Engineers Drilling Log - Legal
Army Corps of Engineers Drilling Log - Letter
Army Corps of Engineers HTW Drilling Log
British Standard BS 5390 Core Log
British Standard BS 5930 Borehole Log
British Standard BS 5930 Boring Log
British Standard BS 5930 Core Boring Log
CompletedTutorial
Environmental - CMT
Environmental - Monitoring Well
Environmental - OVA and Well
Environmental - Three Graphs
Environmental - Two Graphs
Environmental - VOC and Well
Environmental - VOC Concentrations
Environmental - Well
Flood Control
Geophysical - 2 Logs
Geophysical - 3 Logs
OK
Cancel
Help

Import Version 5 Logs and Templates

GTGS Version 5 had both templates and logs associated with it. Win-LoG Version 4 has the ability to import both.

Importing a GTGS Template

GTGS Version 5 Templates can be imported into WinLoG by selecting the Version 5 Template menu item from the Import GTGS Data submenu of the Import submenu. This will display the Import GTGS Version 5 Templates Form.



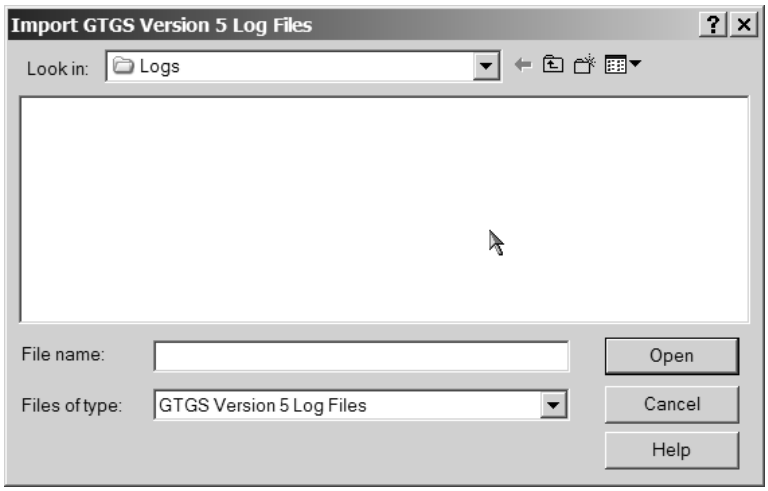
The Import GTGS Version 5 Template File Form is used to select the name of the GTGS template. After the file has been selected, press the Open button to display the Enter Template Name form.

The Enter Template Name form shows the current templates in the database. The user must enter a unique name for the new template and press the Ok button.

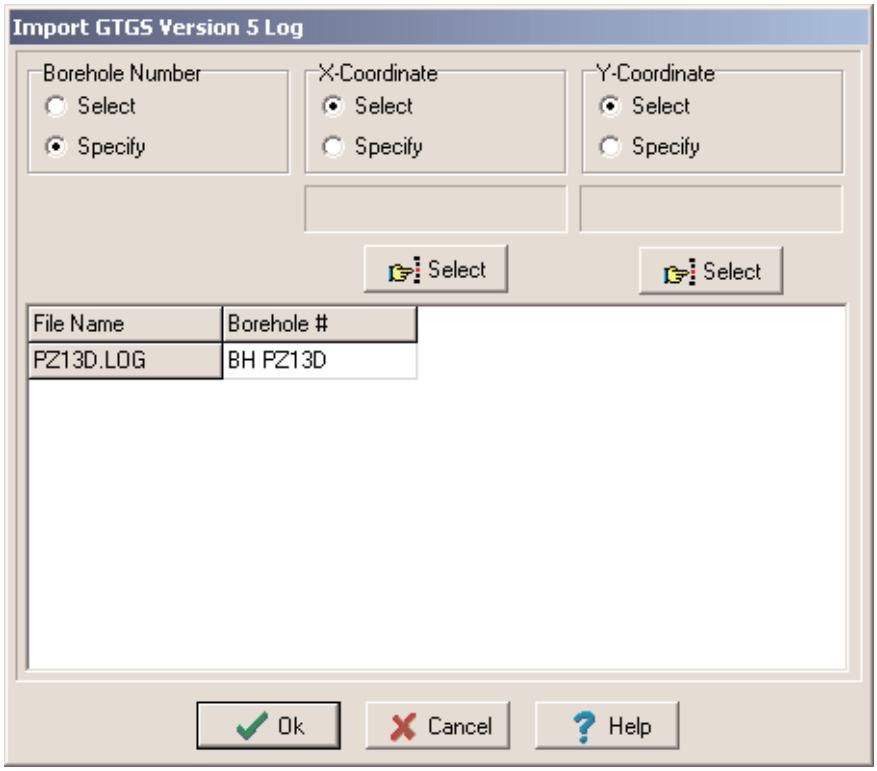
Importing a GTGS Log

GTGS Version 5 Logs can be imported into WinLoG by selecting the Version 5 Log menu item from the Import GTGS Data submenu. This will open up the Import GTGS Version 5 Log form on the next page.

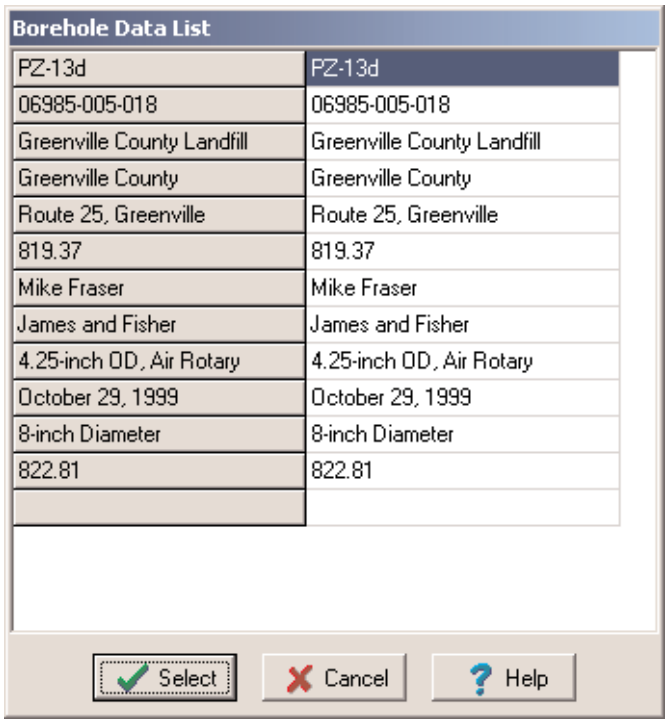
The Import GTGS Version 5 Log File form allows users to select the name of the GTGS Log they would like to import.



After the file has been selected, press the Open button and the Import GTGS Version 5 Log form below will be displayed. This form allows the user to either select or enter the imported borehole's Borehole Number, X-Coordinate and Y-Coordinate.



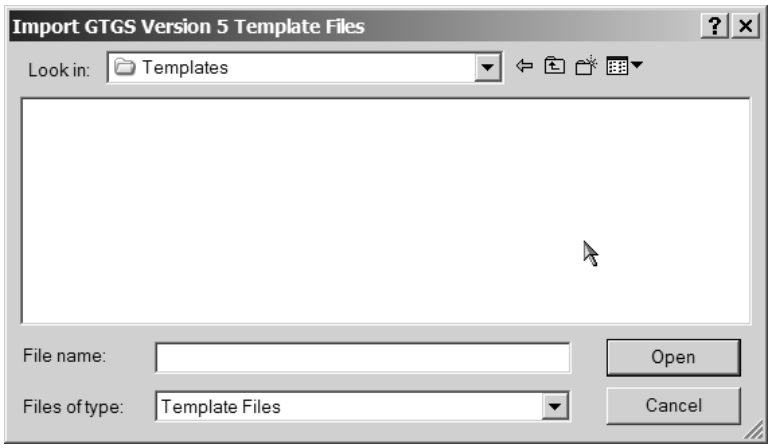
If the user wishes to specify the field then they click on the Specify button radio button for the field. If they wish to select the field value then click the field's Select radio button and then click the Select button and the Borehole Data List form below will be shown.



The Borehole Data List form lists all the header data that is in the GTGS Version 5 header section. When the user highlights a borehole header and clicks the Select button, that header is then stored in the borehole number, X-Coordinate, or Y-Coordinate field depending on the field selected.

After the Borehole Number, X and Y Coordinates have been specified press the Ok button to continue.

The last step to import a GTGS Version 5 log is to specify the template to use to format the log data. The Open GTGS Version 5 Template File form allows users to select the name of the GTGS Template they would like to use.

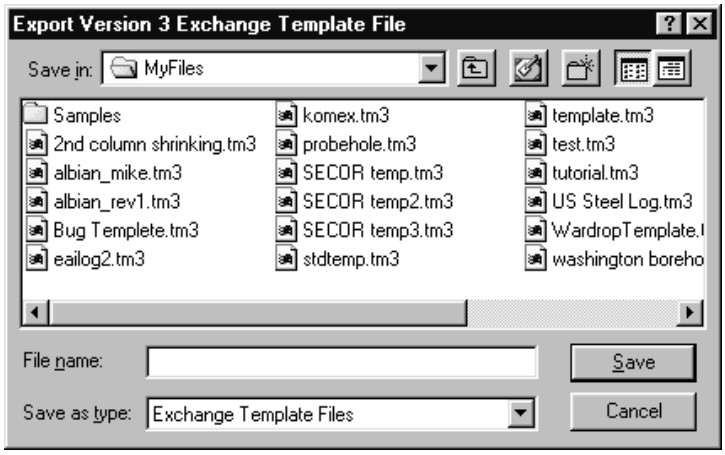


Exporting to Exchange Files

Tip

To send a borehole log or template to Technical Support it should first be exported to an exchange file. This exchange file can then be emailed to Technical Support.

Exchange files are used to transfer borehole logs, templates, and legends between projects or to other companies. The data in these files is stored as ASCII text. The process for exporting to an exchange file is identical for both version 3 and 4.



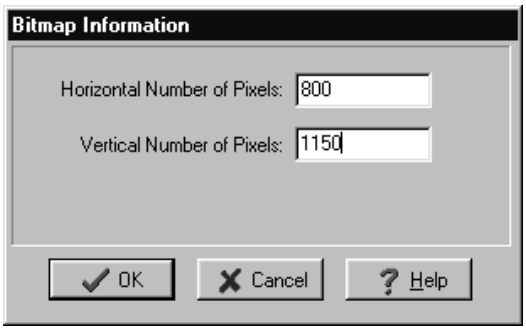
To export the currently displayed borehole log, template, or legend select the Exchange File menu item from the Export submenu. An Export form similar to the one on the previous page will be displayed. Specify the file name for the exported data and then press the Save button.

Borehole log exchange files have the extension ".lg3" for version 3 and ".lg4" for version 4; template exchange files have the extension ".tm3" for version 3 and ".tm4" for version 4; and legend exchange files have the extension ".lgd3" for version 3 and ".lgd4" for version 4.

After the data has been exported from another project, it can then be imported into the current project.

Exporting to the Clipboard

Any currently displayed borehole log, template, or legend can be exported to the Windows clipboard. The format used to store the data in the clipboard is similar to a bitmap file. To export the data to the clipboard select the Clipboard menu item from the Export submenu. The Bitmap Information form shown below will be displayed.



The horizontal and vertical number of pixels determines the resolution used to store the bitmap in the clipboard. The higher the resolution the clearer the picture will be. The number of colors is the same as the current screen resolution.

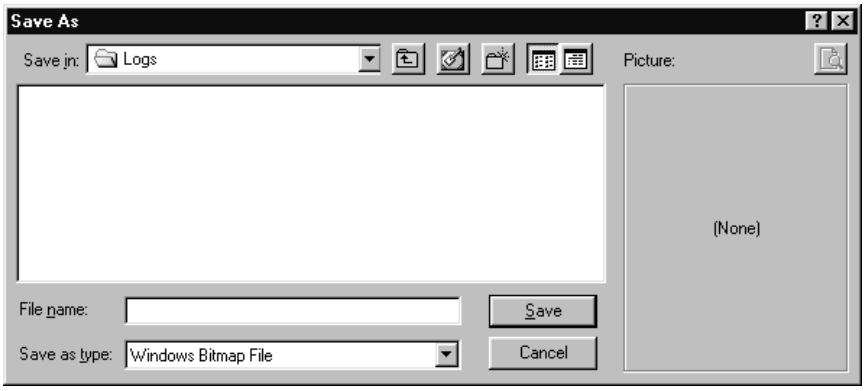
Tip

Higher resolutions should be used when the clipboard is to be printed.

Exporting to a Bitmap File

Exporting to a bitmap file is the same as exporting to the clipboard, except that the bitmap is stored in a file instead of the clipboard. The file format is a Windows bitmap .BMP file. Any currently displayed cross-section or template can be exported to a bitmap file.

To export to a bitmap file select the Bitmap File menu item from the Export submenu. Specify the file name on the SaveAs form shown below and then press the Save button.



After the Save button is pressed, the Bitmap Information form shown on the previous page will be displayed. This form is used to set the number of vertical and horizontal pixels for the bitmap file.

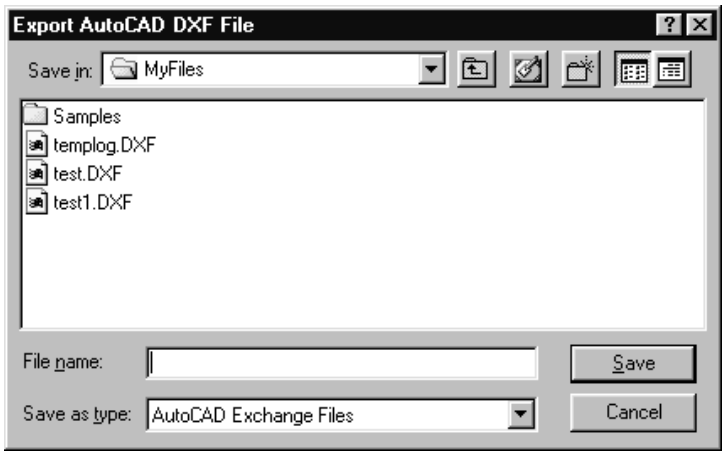
Exporting to a Metafile

Exporting to an enhanced metafile is the same as exporting to a bitmap file. Any currently displayed borehole log, template, or legend can be exported. To export to a metafile select the Metafile menu item from the Export submenu. Specify the file name on the SaveAs form shown on the previous page and then press the Save button.

Exporting to an AutoCAD File

A DXF file is a format designed by AutoCAD to exchange drawing files. The format provides for either ASCII files or binary files. In WinLoG the exchange format used is an ASCII file.

When the AutoCAD DXF menu item of the Export Version 3 Data submenu is selected, the Export AutoCAD DXF File form below will be displayed. Specify the file name to use and press the Save button.



The AutoCAD DXF format does not allow for the exchange of bitmaps or Windows fonts. In addition, the color palettes used can vary depending upon the application. Because of these limitations with the format, the exported logs will not contain any bitmap or font information, and the colors may vary. All of the text in the log will be exported in ROMAN font, and none of the bitmaps used to draw the soil symbols, well seals, and packing, and sample types will be exported.

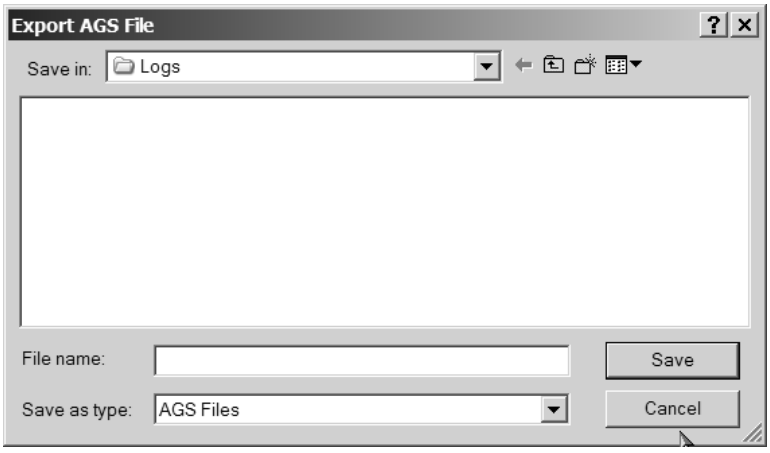
If you require this information in the exported file, it is recommended that you export the log as a bitmap file or enhanced metafile instead. The bitmap file or enhanced metafile can then be imported into AutoCAD.

Only borehole logs can be exported to DXF file format. Since legends are primarily comprised of, bitmaps there is no facility to export them to DXF format. It is recommended that legends be exported in bitmap or enhanced metafile format and then imported if required.

Exporting to an AGS File

One or more borehole logs in a project can be exported to an AGS file by selecting the AGS File menu item from the Export submenu of the Import/Export Data submenu. The Export AGS Project form below will be displayed.

On this form you can select to export all of the boreholes or as many as desired to the AGS project file.



After the boreholes have been selected the Export AGS File form on the previous page will be displayed. Specify the name of the AGS file to use and then press the Ok button to export the logs.

Importing/Exporting Pocket WinLoG Data

Pocket WinLoG is a separate program sold by GAEA Technologies that is used on Pocket PCs. Pocket WinLoG can be used to collect boring and well information in the field with a minimum of data entry. After the data has been collected it can be uploaded or emailed to a desktop computer and imported into WinLoG.

This method of data collection eliminates the need to record boring and well information on paper forms in the field and then enter the data into WinLoG at the office.

As in the desktop version of WinLoG, the program is designed around the project concept for storing log data. This concept allows the user to have numerous projects and an unlimited number of logs within each project. When it is time to upload the log data to the desktop version of WinLoG, the data can be imported on a log by log basis or an entire project at once.

The types of data collected for a boring or well log are controlled by the template. These templates are the same as those used in the desktop version of WinLoG, and can be downloaded from the desktop version at any time. The template specifies the types of general borehole data (header and footer data), sample other data, remark, well, and graph data. In general all of the boring and well logs in a project would use one or two templates, creating a consistent data format for the project.

To minimize the amount of data entry for a boring and well log, lithology and well macros can be created on the desktop and downloaded to Pocket WinLoG.

Synchronizing Pocket WinLoG

Pocket WinLoG can be easily synchronized with the desktop version of WinLoG on your PC. Synchronizing Pocket WinLoG will make sure that any data created in Pocket WinLoG is copied to the desktop. In addition, any templates, symbol libraries, or macros exported in the desktop version of WinLoG will be available to Pocket WinLoG. When you update a file on either your PC or your Pocket PC, the file is updated in the other location the next time you synchronize.

The process of synchronization is performed by Microsoft ActiveSync, which must be running on the desktop computer. This program is usually provided with the Pocket PC. If you do not have this program or require the latest version it can be downloaded free from the Microsoft web site at:

http://www.microsoft.com/mobile/pocketpc/downloads/activesync35.asp

To have ActiveSync synchronize the files for Pocket WinLoG, select the synchronize Files option in ActiveSync. When you select the Files option, a folder called "*Pocket_PC* My Documents" is created on the desktop. Where "*Pocket_PC*" is the name of the ActiveSync partnership that was specified when the Pocket PC was first connected to the desktop. For more information on partnerships review the ActiveSync help.

When Pocket WinLoG is installed the data files are automatically stored in the "Winlog" subfolder of the "My Documents" folder on the Pocket PC. When the synchronize Files option is turned on in ActiveSync this folder on the Pocket PC will be synchronized with the same folder on the desktop. Any data entered in Pocket WinLoG will then be automatically copied to the desktop, and any data exported from the desktop version of WinLoG (templates, symbol libraries, and macros) will be automatically copied to the Pocket PC.

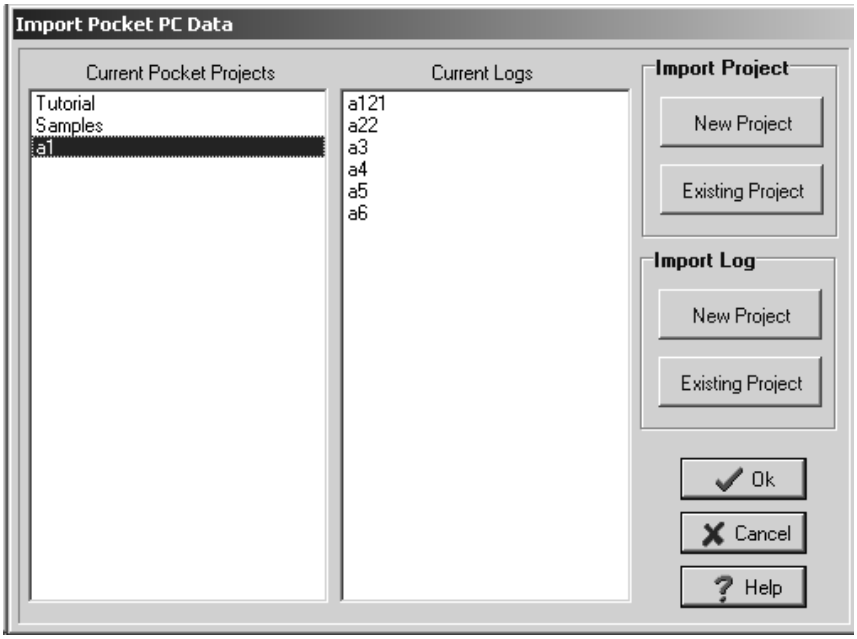
In order to exchange data between the desktop version of WinLoG and Pocket WinLoG, the "Pocket WinLoG Directory" in the desktop WinLoG program Preferences must be set to the "Winlog" subfolder of the "Pocket_PC My Documents" folder used by ActiveSync.

This folder is usually located in "c:\My Documents" on Windows 98 systems or in "c:\Documents and Settings\USERNAME\My Documents" on Windows 2000, XP and NT systems. The name of this folder can be obtained by opening ActiveSync and selecting the Files option in the Options menu. Click on the Settings button and the folder name will be displayed at the top of the form.

Importing Data from Pocket WinLoG

The uploading of data from Pocket WinLoG is performed automatically during the synchronization process. If the data is to be emailed, the files in the "Data" subfolder should be emailed.

To import the uploaded data into WinLoG, select the Import Logs menu item from the Pocket PC Data submenu of the File menu. The Import Pocket PC Data form below will be displayed. This form shows the projects and the logs for each project on the Pocket PC.

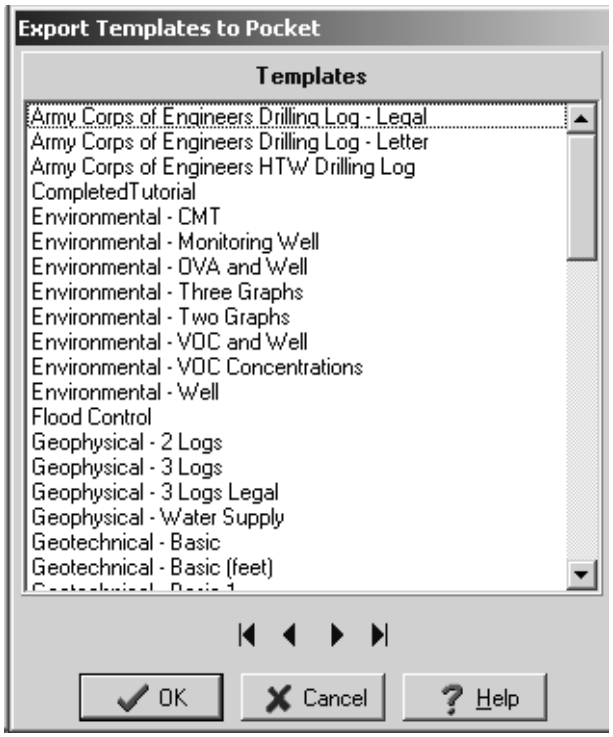


There are several ways to import the log data. The data can be imported for an entire project or for an individual log. This data can either be added to a new project or an existing project. If the data is to be imported into a new project, the New Project form will be displayed after the New Project button is pressed. Enter the project information and press the Ok button to import the data.

If the data is to be imported into an existing project, the Open Project form will be displayed after the Existing Project button is pressed. Select the project and press the Ok button to import the data.

Exporting Templates to Pocket WinLoG

One or more templates in WinLoG can be exported and downloaded to Pocket WinLoG by selecting the Export Templates menu item from the Pocket PC Data submenu of the File menu in the desktop WinLoG. The Export Templates to Pocket form below will be displayed.



A template can be selected by clicking on it with the mouse. To select additional templates use the Ctrl or Shift key. After the Ok button is pressed the templates will be exported. The exported templates will then be automatically downloaded to the Pocket PC during synchronization.

Exporting Lithology Macros to Pocket WinLoG

To export and download the lithologic macros in WinLoG to Pocket WinLoG, select the Export Lithologic Macros menu item from the Pocket PC Data submenu of the File menu. All of the lithologic macros will be exported. These macros will be automatically downloaded to the Pocket PC during synchronization.

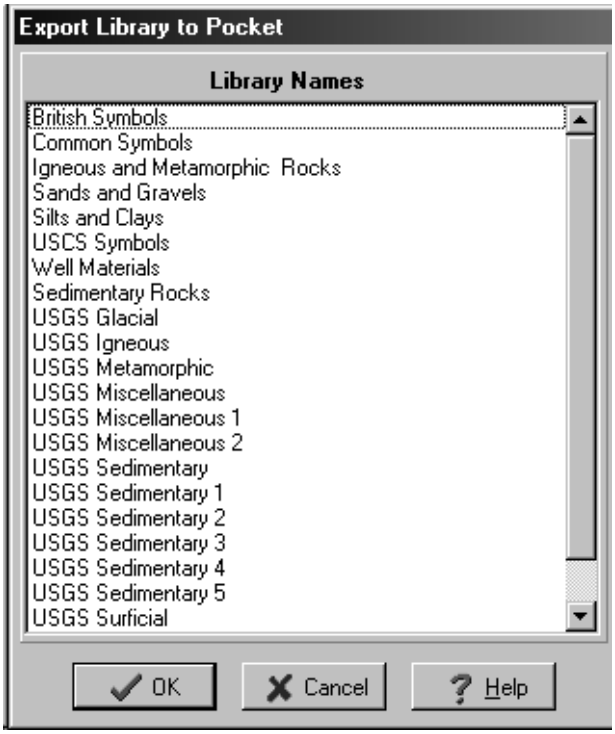
Exporting Well Macros to Pocket WinLoG

To export and download the well macros in WinLoG to Pocket WinLoG, select the Export Well Macros menu item from the Pocket PC Data submenu of the File menu. All of the well macros will be exported. These macros will be automatically downloaded to the Pocket PC during synchronization.

Exporting Symbol Libraries to Pocket WinLoG

Symbol libraries in the desktop version of WinLoG can be exported and downloaded to Pocket WinLoG by selecting the Export Symbol Library menu item from the Pocket PC Data submenu of the File menu in the desktop version of WinLoG. The Export Symbol Library to Pocket form on the next page will be displayed.

A symbol library can be selected by clicking on it with the mouse. The exported symbol library will then be automatically downloaded to the Pocket PC during synchronization.



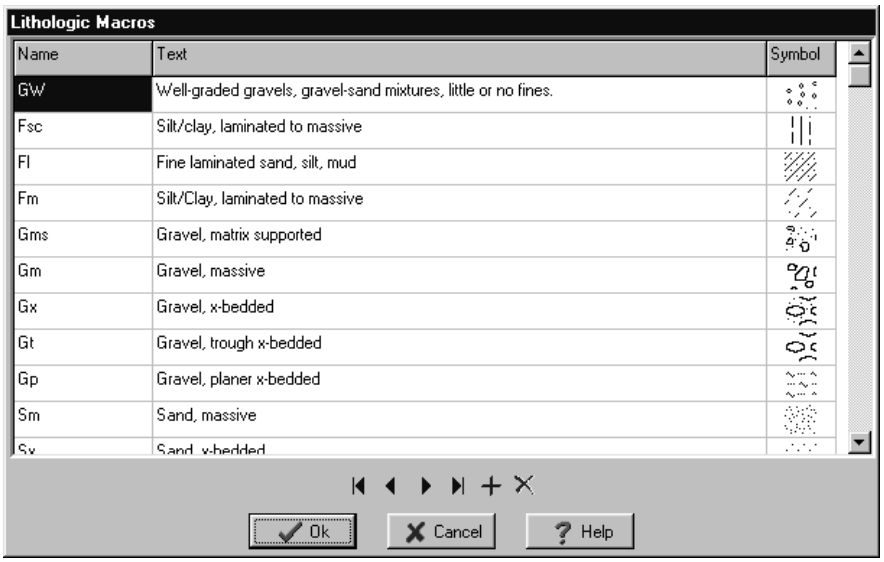
Creating and Editing Lithologic Macros

Lithology macros are used to insert previously defined text and symbols into lithologic layers. By using lithology macros borehole logs can be created faster and more consistently. For a description on how to insert a lithology macro in a layer, see Chapter 4. An unlimited number of lithology macros can be stored in the WinLoG program.

To create and edit lithology macros, select the Lithology Macros menu item from the File menu. The Lithology Macros form on the next page will be displayed.

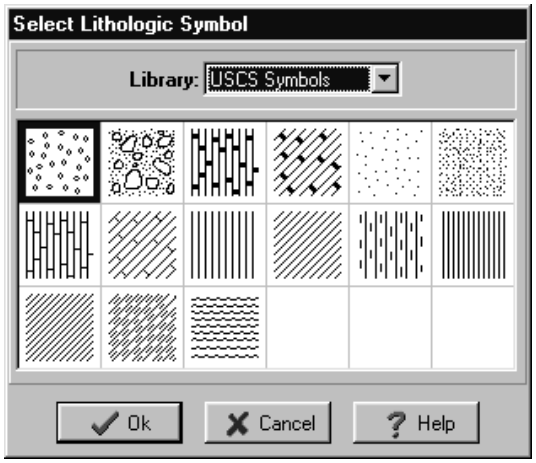
The following information can be entered on this form:

Name: This is the name of the lithology macro (up to 100 characters). The name is used only for selection purposes and will not be inserted into the layer.



Text: This is the text of the lithology macro (up to 255 characters). The text of the macro will be inserted into the layer description.

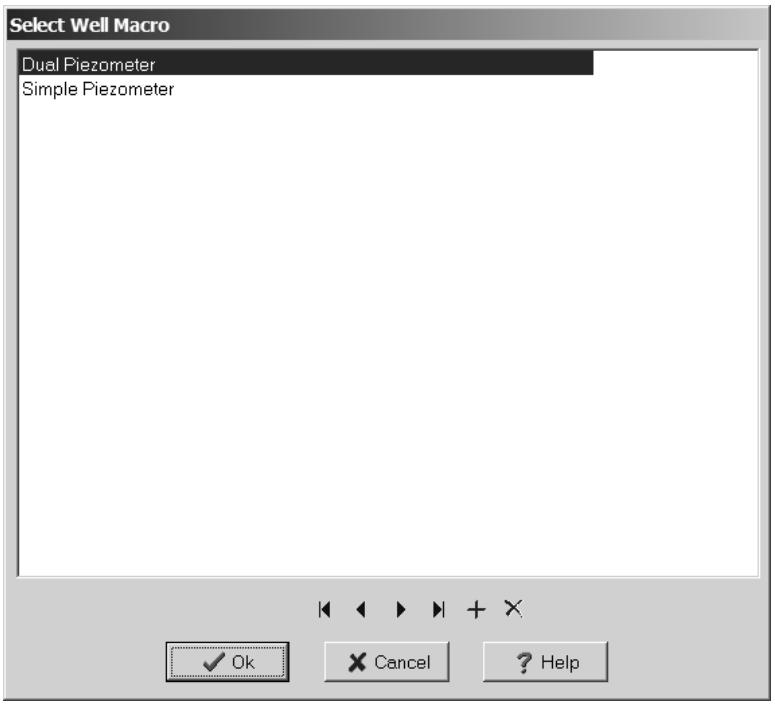
Symbol: This is the lithologic symbol for the macro. When the macro is inserted into the layer description, there will be the option to change the layer symbol to this symbol. When this column is selected, a button will appear for the symbol. To change the symbol, click on the button and the Select Lithologic Symbol form below will be displayed. This form can be used to select the lithologic library and symbol.



Creating and Editing Well Macros

Well macros can be used to quickly add standard well components, water level information, and text annotation to a log. Macros can be used for single well installation, complex nested wells, above-ground well casings, etc. All well macros are stored as Type 3 wells.

Well macros can be created using the Well Macros menu item on the File menu, or by saving existing well completion details of a log as a well macro. There is no limit to the number of macros that can be used. To create or edit a Well Macro using the File menu, select the Well Macros menu item. The Select Well Macros form below will be displayed, listing all of the current well macros.



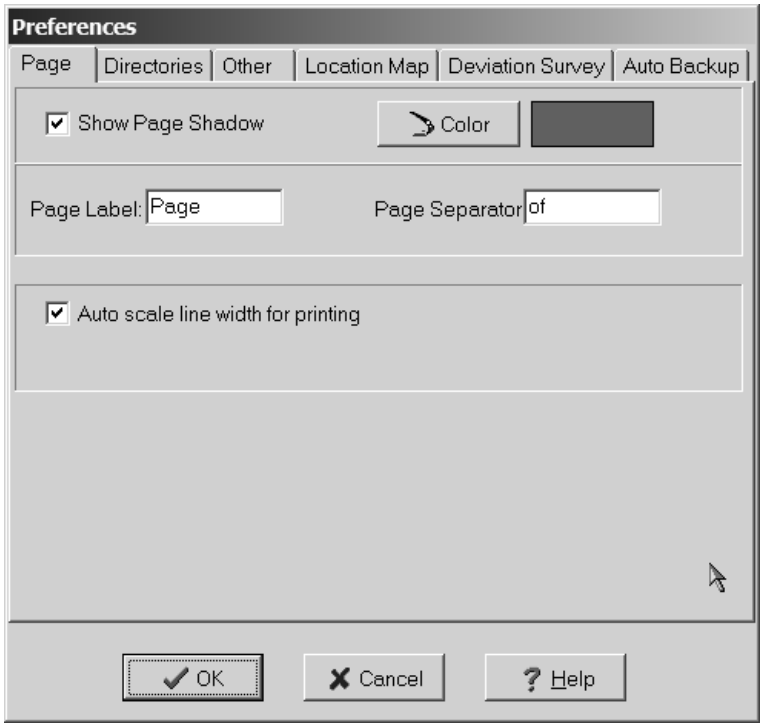
An existing well macro can be edited by double-clicking on it in the list. To add a new well macro click on the plus button at the bottom of the form.

The creation and editing of the well macros use the same form as that used for Well Type 3 data. This form has four tabs for the Layout, Components, Water Levels, and Annotation. For a detailed description on how to use this form see the section entitled "Well 3 Type Column" in the "Borehole Logs" chapter.

Well macros can also be created after the well data has been input for a log, using the "Save as Well Macro" button on the "Well" form. When this button is pressed a form will be displayed where you can specify the name of the well macro.

Setting Program Preferences

Using the Preferences menu item of the File menu, preferences for file directories and display characteristics can be set for the WinLoG program. When this menu item is selected the Preferences form below is displayed. This form has six tabs that are described below.



Page Tab

The following parameters can be set on the Page tab shown above:

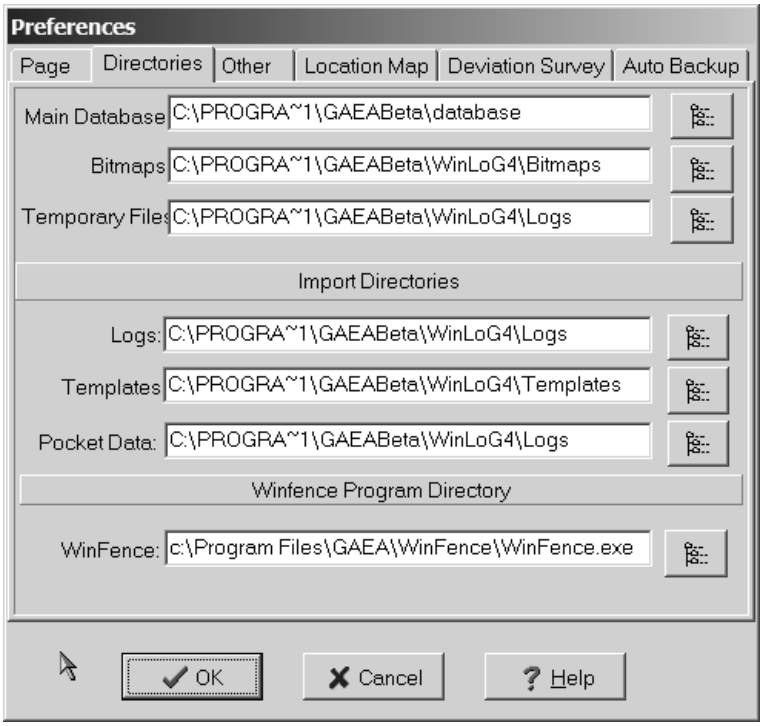
Show Page Shadow: Check to show a shadow underneath the page on the screen. This shadow does not appear on the printout.

Color: This is the background color of the desktop. Click on the Color button to select the background color.

Page Label: This is the label used in the header or footer of the template to indicate the page number of the borehole log. The program will check for this text when displaying the log and place the page number after the text label. By changing the label, a variety oflanguages can be supported.

Page Separator: This is the separator to display between the page number and total number of pages. By changing the separator, a variety of languages can be supported. To not display the total number of pages, leave this field blank.

Auto Scale Line Width for Printing: Check this box to have the program automatically set the scale factor for lines during printing. If this box is not checked, an input box will be displayed where you can enter the scale factor to use. Normally, this box should be checked so that the program automatically calculates the scale factor. Occasionally, when printing on large pages, such as 11x17, you will need to set this scale factor manually.



Directories Tab

The Directories tab shown above is used to specify the following parameters:

Main Database: This is the directory where the Master Project Database is located. It should only be changed if the database has been moved. The directory can be changed by entering the new directory or pressing the Select Directory button to the right of the input line.

Bitmaps: This is the directory where the bitmaps for lithologic, well, and sample symbols are stored. This directory should only be changed if these symbols have been moved.

Temporary Files: This is the directory where temporary files are stored. These files are created by the undo process when editing logs, templates and legends. If you are using the program on a network,this directory should be on the local computer.

Tip

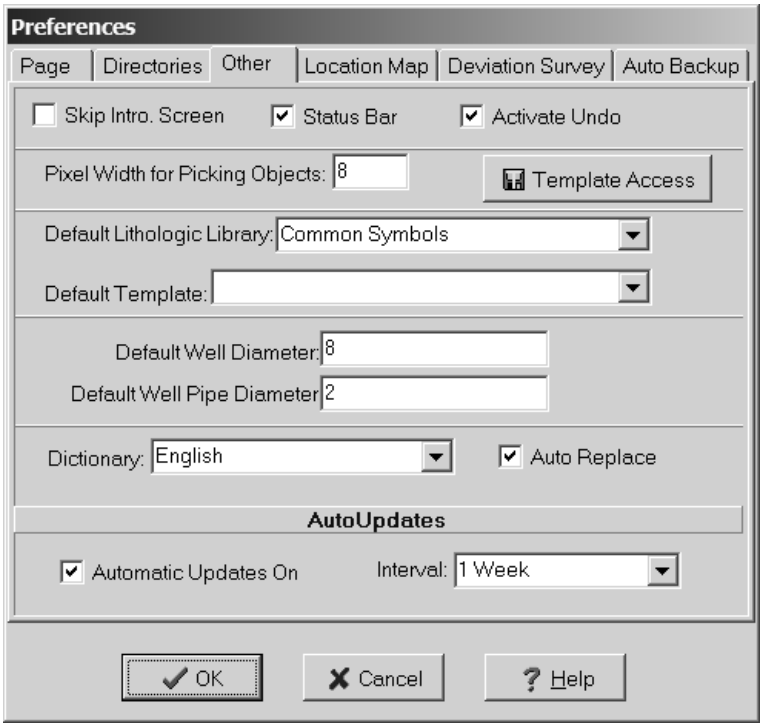
If you are using the program on a network, the default directory should be on the local computer.

Logs: The default directory to use when importing or exchanging logs. To change the directory, specify the directory name in the input line or press the Select Directory button to the right.

Templates: The default directory to use when importing or exporting templates. To change the directory, specify the directory name in the input line or press the Select Directory button to the right.

Pocket Data: The directory is used to exchange data with Pocket WinLoG.

WinFence: This is the name and path of the WinFence program on your computer. The WinFence program will be started when a cross-section on the location map is double-clicked.



Other Tab

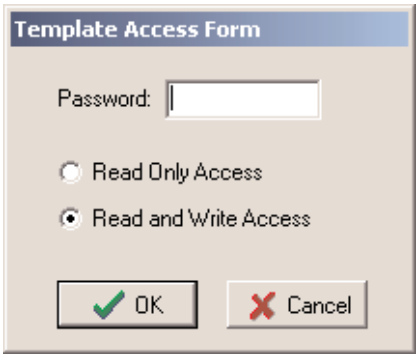
The Other tab shown on the previous page is used to specify the following parameters:

Skip Introduction Screen: Check to not show the Introduction screen when the program is started. This is the screen that lets you chose to open a new project, and existing project, or the last project.

Show Status Bar: Check to show a status bar at the bottom of the desktop.

Pixel Width for Picking Objects: This controls how close the cursor has to be to an object's edge to pick the object. This setting is used when adjusting the size and position of columns, layers, lines, etc. A setting between 5 and 10 is recommended.

Template Access: Click on this button to change the template database to and from read only access. The Template Access Form will then be displayed. Enter the password (Call GAEA for the password). Click the type of access you would like the user to have, either:



a) Read only Access - the user can only view templates and use them to create logs.

b) Read and Write Access - the user has both read and wrote access on templates, legends and symbol libraries.

Default Lithology Library: The default library to use when specifying lithology symbols for soil and rock layers. Select the library by clicking on the arrow to the right.

Default Template: This is the default template to use when creating a new borehole log. The template can be selected by clicking on the arrow to the right.

Tip

In many companies it is sometimes advantageous to have only one or two employees that have access to all the companies Templates, Lithologies libraries, and Text Macros. This can be accomplished by the system administrator changing the read-write preferences of the template database.

Default Well Diameter: This is the default diameter to use when adding well columns to a borehole log. The actual well diameter is set in the log.

Default Well Pipe Diameter: This is the default pipe diameter to be used when adding pipes and screens to well columns.

Dictionary: This is the dictionary to use when performing spell checking. One of the following dictionaries can be selected: American, British, Dutch, English, French, German, Italian, and Spanish.

Auto Replace: If checked, common misspelled words will be automatically replaced when conducting spell checking.

Automatic Updates: When this box is checked the program will automatically check and install updated to the WinLoG program from the Internet. If you have an Internet connection to your computer it is recommended that this box be checked.

Interval: This is the time interval between checks for automatic updates.

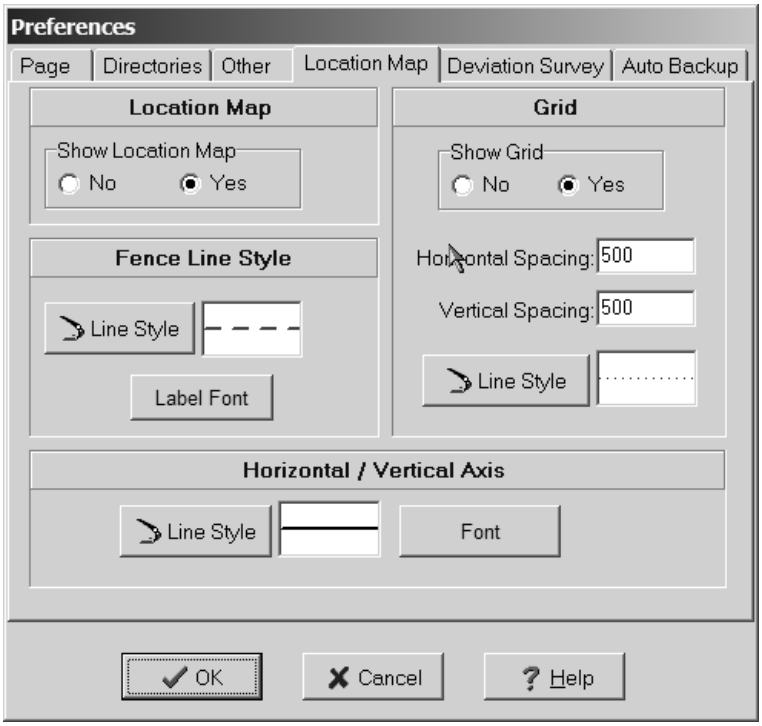
Location Map Tab

The Location Map tab shown on the next page is used to specify the following parameters:

Show Location Map: This radio button allows the user to turn the location map on or off.

Fence Line Style: Clicking the line style button opens a Line properties form on which the user can user select the type of fence line representation they would like on the location map.

Fence Label Font: The font button allows the user to edit the fence line font. Clicking on the button opens up the Font Style form. This form allows the user to change the font, font size, font color and font style.



Show Grid: This is used to turn the grid on and off.

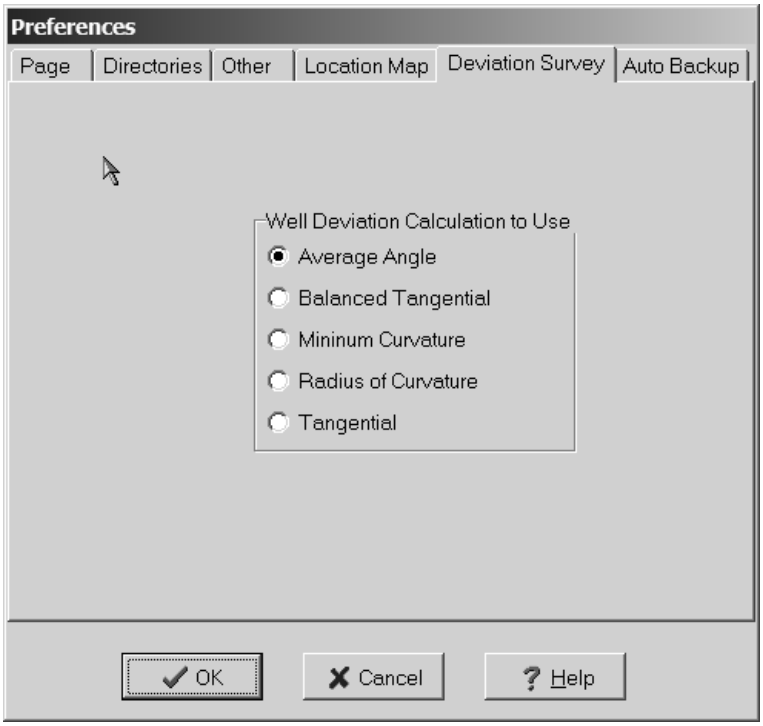
Horizontal Spacing: This is the spacing between horizontal grid lines as shown on the location map in real grid coordinates of either feet or meters.

Vertical Spacing: This is the spacing between vertical grid lines as shown on the location map in real grid coordinates of either feet or meters.

Grid Line Style: Clicking the line style button opens a Line properties form on which the user can user select the type of grid lines.

Horizontal/Vertical Axis Line Style: Clicking the line style button opens a Line properties form on which the user can user select the type of axis line they would like on the location map.

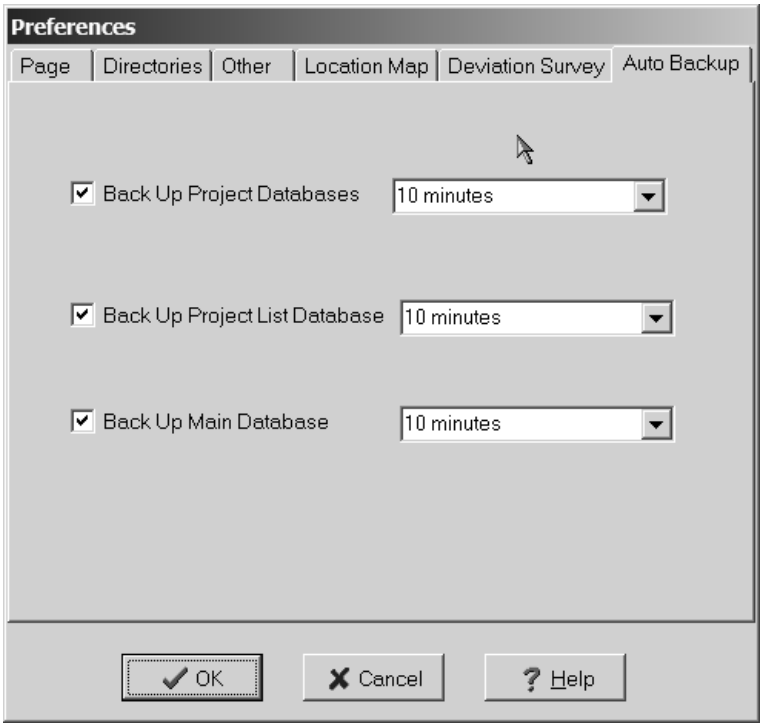
Horizontal/Vertical Axis Font: The font button allows the user to edit the size of the axis font .



Deviation Survey Tab

A new feature added to Winlog Version 4 is the ability to represent deviated boreholes. The Deviation Survey tab shown above is used to specify the following parameters:

Well Deviation Calculation to Use: This is used to select the calculation for the deviation survey. Winlog provides five different calculations from which to calculate borehole X,Y, and Z coordinates based on a deviation survey which includes the measured depth, inclination angle, and the azimuth angle.



Auto Backup Tab

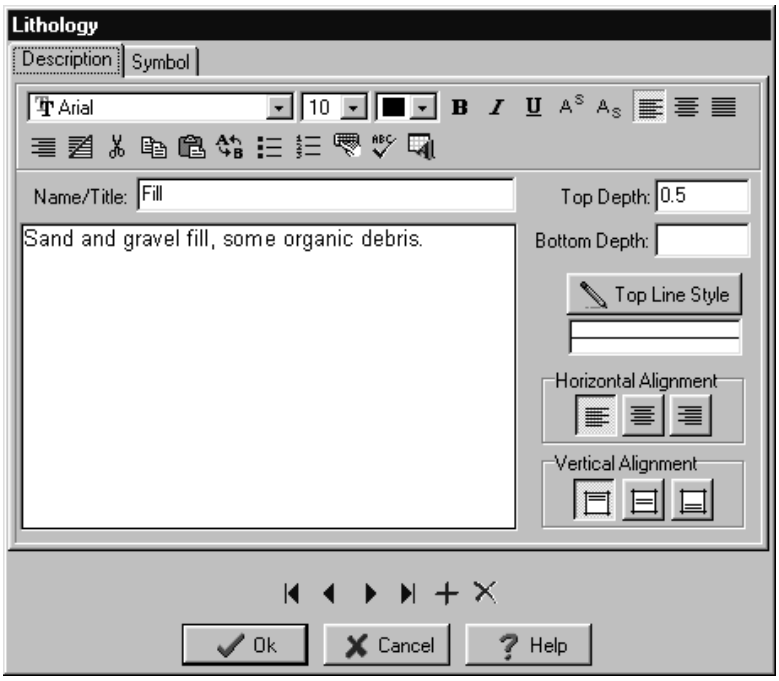
The Auto Backup tab shown above is used to specify the following parameters:

Back Up Project Database: If this checkbox is checked then the currently open project will be backed up at a regular interval defined by the combobox to the right of it. If this checkbox is not selected then the currently open project will not be backed up.

Back Up Project List Database: If this checkbox is checked then the WinLoG project list database will be backed up at a regular interval defined by the combobox to the right of it. If this checkbox is not selected then the WinLoG project list database will not be backed up.

Back Up Main Database: If this checkbox is checked then the WinLoG main database will be backed up at a regular interval defined by the combobox to the right of it. If this checkbox is not selected then the WinLoG main database will not be backed up.

4. Borehole Logs



4. Borehole Logs

Borehole logs are used to display the results of oil and gas, mining, geotechnical and environmental drilling and sampling. Logs can be used to display soil, rock, and ice samples. Using WinLoG, there are no limits to the types of borehole logs that can be created. In WinLoG the term borehole logs also includes boring logs and well logs.

Borehole logs are grouped into projects and are stored in the WinLoG project database. The format of the project database is Microsoft Access. Each project is stored in a separate directory, which can be on the same computer or spread across a network. For a detailed discussion of the database structure, see Database Structure in the Introduction Chapter or Appendix B.

Logs can contain general borehole data (ex. location, client, project number); lithologic descriptions and symbols for each layer; sample data; well completion details; water level measurements; geophysical logs; and numerous graphs and text columns. Once a log is created it can be easily copied using a toolbar button, and then edited and saved to represent other boreholes on the same site.

This chapter describes how to:

1. Create a new borehole log
2. Enter and edit the following information:
   - General borehole data

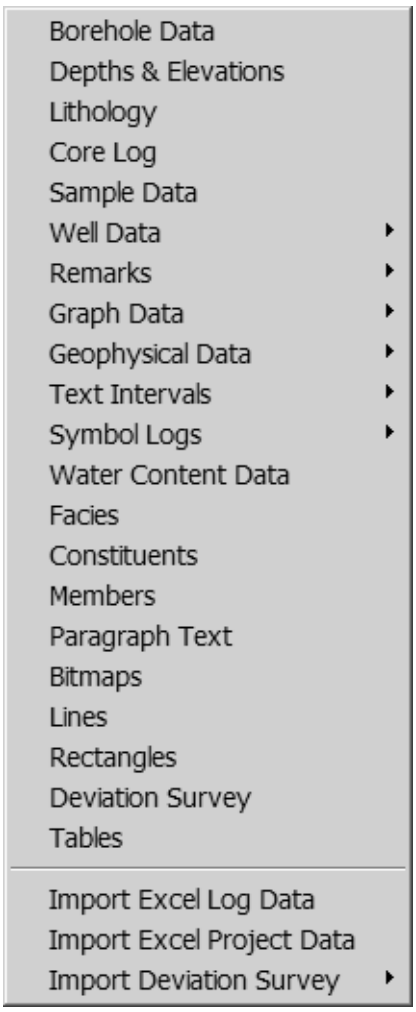
- Log depth and elevation
- Lithologic descriptions
- Sample data
- Well data
- Remarks
- Graph data
- Water Content data
- Text data
- Text Interval data
- Facies data
- Constituents data
- Members data
- Core log data
- Geophysical data
- Cross-plots
- Percent Cuttings data
- Core Photo data
- Paragraph text
- Bitmaps
- Lines and arrows
- Rectangles
- Tables
- Deviation Survey data
- Import Excel Log data
- Import Excel Project data
- Import Deviation Survey data

3. Save a borehole log.
4. Print a borehole log.
5. Copy a borehole log.
6. Deleting a borehole log.
7. Change the template for a borehole log.

These tasks can be performed using menu commands on the File menu and Edit menus or speed buttons on the Borehole Log toolbar, shown below.

File Menu

Edit Menu



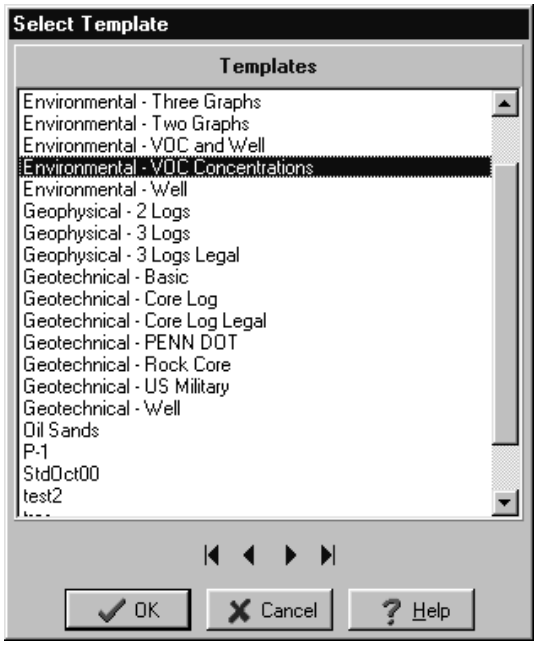
Borehole Log Toolbar

Templates (see Chapter 5 Templates) are used to control the layout and formatting of borehole logs. In general, all of the boreholes in a project would use one or two templates to format the logs. In this way, a consistent format can be established within a project and across projects.

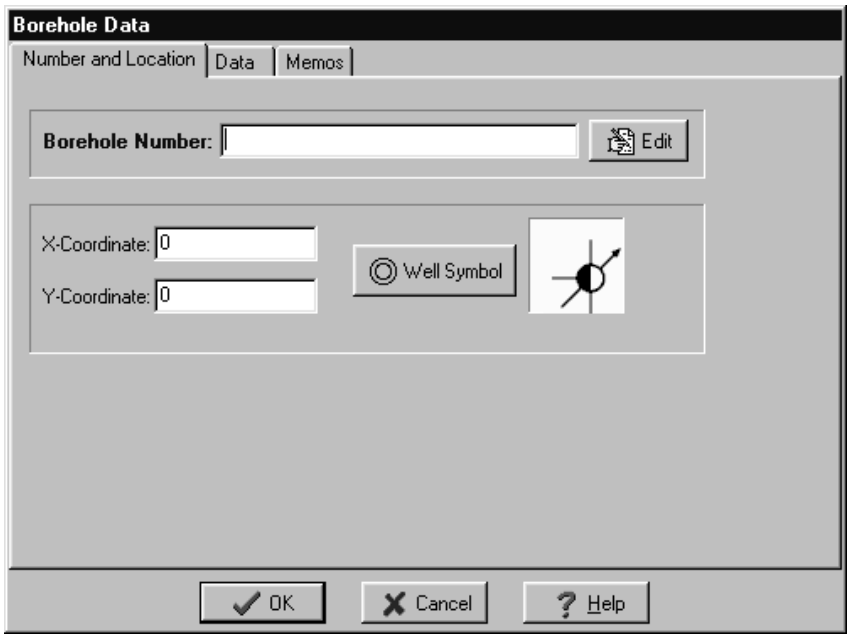
Creating a New Borehole Log

After a project has been opened or created, borehole logs can be added to the project by importing borehole logs (see Chapter 3) or creating new borehole logs.

To create a new borehole log and add it to the current project either select the New Borehole Log menu item of the Borehole Logs sub menu of the File menu or click the New button on the Borehole Log Toolbar. The Select Template form below will be displayed after the new borehole button or menu item has been selected. The Templates list box displays the names of all of the templates currently in the Master database.



After selecting the desired template press the Ok button and the Borehole Data form on the next page will be displayed. The primary purpose of this form is to enter the unique Borehole Number and other general borehole data. After a unique Borehole Number and any other information has been entered, press the Ok button and the new log will be displayed. For a complete description on how to use the Borehole Data form, see the section on entering and editing General Borehole Data below.



Entering and Editing Borehole Data

To enter or edit data in a borehole log, the log must first be created as described above or an existing log opened. Borehole logs in the current project can be opened for editing by:

· selecting the Open Borehole Log menu item of the Borehole Logs sub menu of the File menu,

· clicking the right mouse button and select the Open Borehole menu item from the popup menu, or

· clicking the Open button on the Borehole Log Toolbar.

After the borehole log has been opened and displayed, the borehole data can be entered and edited as described in the sections below.

General Borehole Data

The General Borehole Data for a log includes information about the borehole number, X and Y coordinates, well symbol, text and memo information. Text and memo information can include information such as project name, location, client, date, drill method, etc. The difference between text data and memo data is that there is no limit to the length of memo data and memo data can contain rich text.

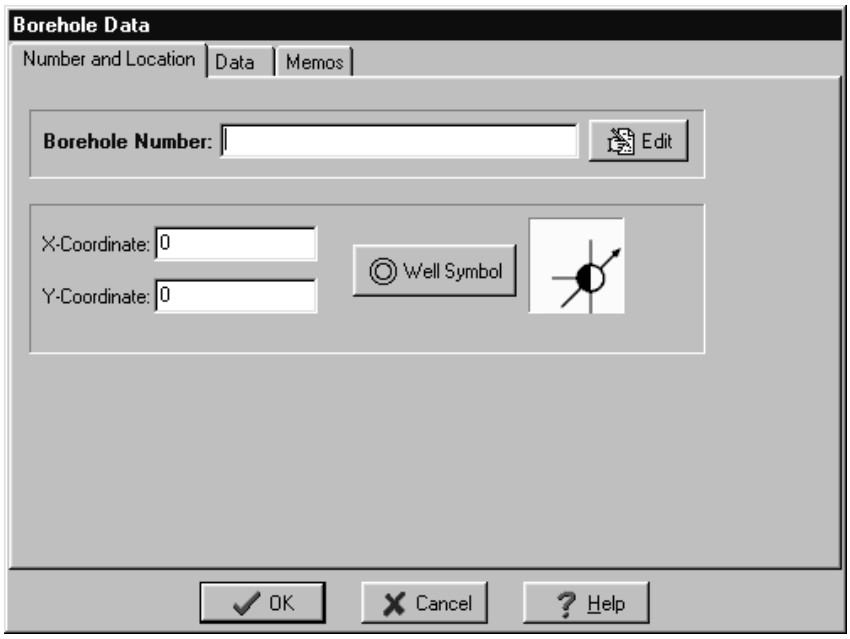
General Borehole data is usually displayed in the header and footer of the log. The template being used determines the location of the data. Unlike previous versions of WinLoG, the general data is now tied to the type of data in the template. This way if the template is edited or a different template is used the data will move depending upon the location within the template. For example, if the data is for the location of the borehole and in the template the location is the first line of the header. If later the template is edited and the location is moved to the third line of the footer, when the borehole log is displayed the location will show up in the third line of the footer.

To edit the general borehole data and display the Borehole Data form on the next page either:

- select the Borehole Data menu item from the Edit menu;
- right click the mouse button and select the Borehole Data menu item from the popup menu; or
- click the left mouse button inside the header or footer of the borehole log.

The Borehole Data form has three tabs that can be used to enter and edit general borehole data.

Number and Location Tab



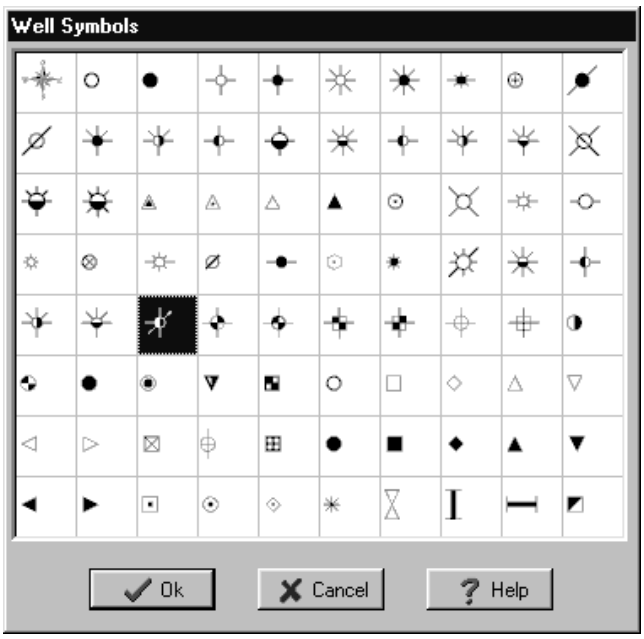
The Number and Location tab can be used to edit the following information (underlined items are key fields used in the database and must be entered):

Borehole Number: This is the unique borehole number (up to 100 characters) used to store the borehole data in the database. Care should be taken in changing this number since it will affect how the data is stored. To edit the borehole number click on the Edit button to the right of the input line. A Enter Borehole Number form will be displayed, showing the current boreholes in the project. Enter a unique borehole number, not currently in the list, and then press the Ok button.

X-Coordinate: The X coordinate for the borehole location.The units for the coordinates should be the same as the Y coordinate and other boreholes in the project.

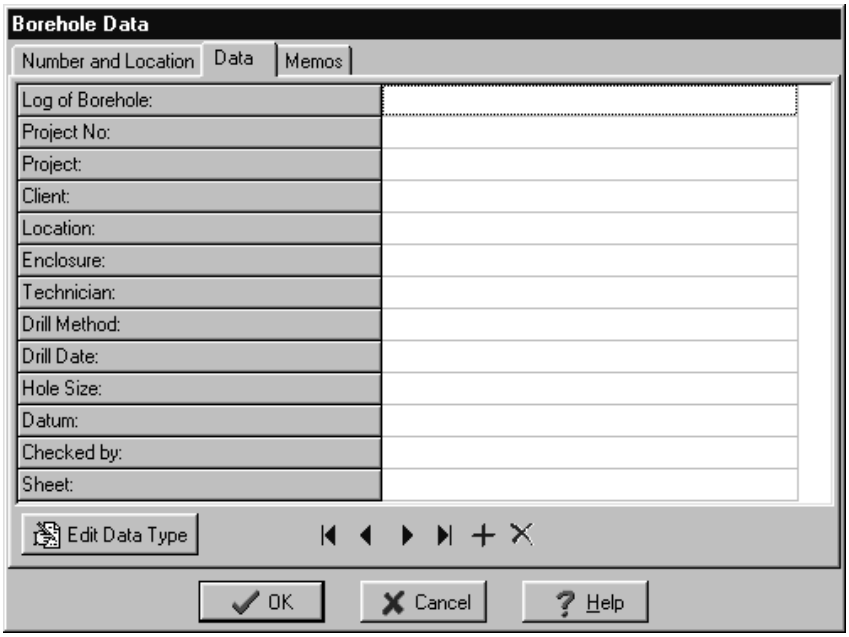
Y-Coordinate: The Y coordinate for the borehole location.The units for the coordinates should be the same as the X coordinate and other boreholes in the project.

Well Symbol: The well symbol is used to represent the borehole on the location map. To change the well symbol click on the Well Symbol button, the Well Symbols form below will be displayed. Select the desired symbol and press the Ok button.



Data Tab

The Data tab, shown on the next page, is used to edit the general text data for the program; such as, project name, location, client etc. New and edited data (up to 255 characters) can be entered on the input lines to the right of the data type. The buttons at the bottom of the tab are used for the following:



The buttons at the bottom of the tab are used for the following:

The Start button moves to the first data record.

The Previous button moves to the previous data record.

The Next button moves to the next data record.

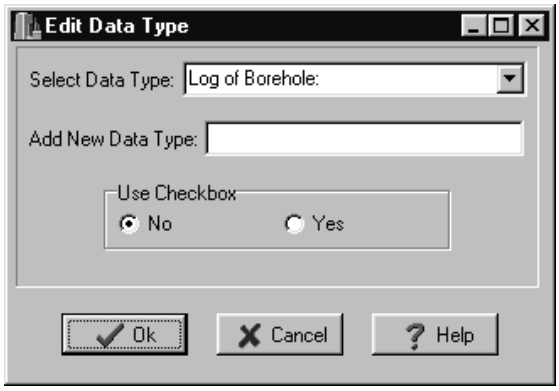
The End button moves to the last data record.

The Insert button creates a new data record.

The Delete button deletes the data record.

If the data type has a checkbox then a grey checkbox will appear in the input line. This checkbox can by checked by clicking on it.

The template being used for the log determines the type of data and previous data entered for the log. The data type will appear along the left side of the list. To change the type of data press the Edit Data Type button at the bottom of the form. The Edit Data Type form below will be displayed.



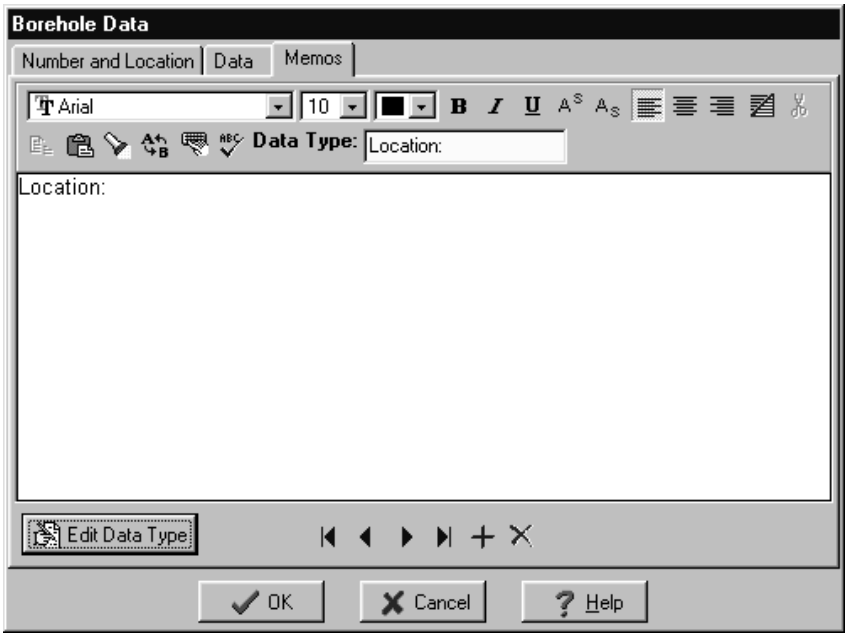
This form can be used to enter a unique new data type. Care should be used in changing the data type since it will effect where the data is displayed on the template.

The new data type can be selected from the list using the arrow to the right of the Select Data Type line or it can be specified in the Add New Data Type line. In addition, the data type can contain a checkbox by setting Use Checkbox to Yes.

Memos Tab

The Memos tab, shown on the next page, is used to enter and edit memos for the general borehole data. There is no limit to the length of the memo data and the data can contain rich text. The buttons at the bottom of the tab have the same functions as described above.

The Data Type of the memo is shown in the top right of the form. It can be changed the same way as in the Data tab, by clicking on the Edit Data Type button.



At the top of the Memo tab is the Rich Text toolbar, this toolbar can be used to modify the font characteristics of the memo text. Before selecting a speed button, the text to be modified should be selected with the mouse.

The speed buttons of the toolbar perform the following functions:

The **Font Typeface** box is used to select the name of the font to use for the selected text.

The Font Size box is used to set the size of the font for the selected text.

The Font Color box is used to select the color of the font for the selected text.

The **Bold** button is used to toggle the bold attribute of the selected text on and off.

The **Italics** button is used to toggle the italic attribute of the selected text on and off.

The **Underline** button is used to toggle the underline attribute of the selected text on and off.

The **Superscript** button is used to toggle the superscript attribute of the selected text on and off.

The **Subscript** button is used to toggle the subscript attribute of the selected text on and off.

The **Left Justify** button will left justify the selected text.

The **Center Justify** button will center justify the selected text.

The **Right Justify** button will right justify the selected text.

The **Select All** button will select all of the text in the memo field.

The **Cut** button will remove the selected text and place it in the clipboard.

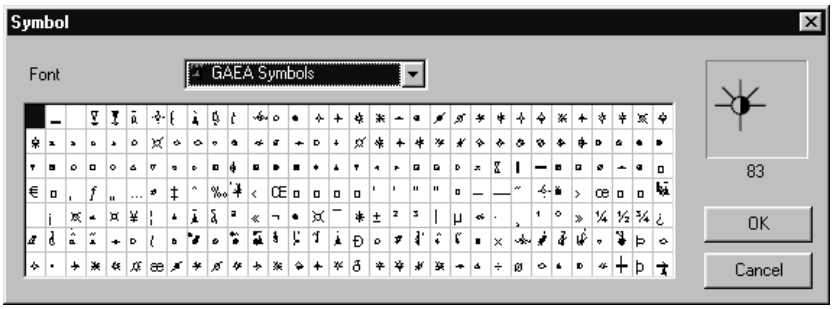
The **Copy** button will copy the selected text to the clipboard.

The **Paste** button will paste the text in the clipboard, at the current position of the cursor in the memo field.

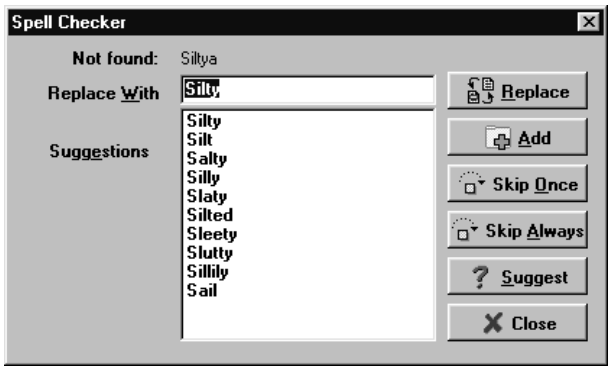
The **Find** button will find the specified text in the memo field.

The **Replace** button will replace the specified text in the memo field.

The **Symbol** button will display the Symbol form shown below. This form is used to place a symbol at the current cursor position in the memo field. To select a symbol use the Font box to select the font containing the symbol and then select the desired symbol. After the desired symbol has been selected, press the Ok button to insert it into the memo field. The WinLoG program comes with a font called "GAEA Symbols" that contains a variety of well and other symbols.



The **Spell Check** button will display the Spell Checker form shown below and will check the spelling in the memo field. The dictionary used to check the spelling is set in the program Preferences (see Chapter 3). When the Add button is pressed the word will be appended to the custom dictionary.



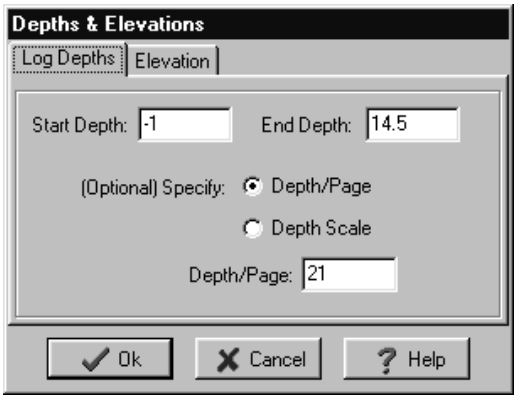
Depths and Elevations

Before entering any log data in the main block of the log, the borehole depth should be entered. The borehole depth is usually (depending upon the template) displayed in a column in the main block of the log. There is no limit to the depth of a borehole log. The depth entered must be in the same units as the input units for the template.

The depth and elevation parameters of the borehole log can be entered and edited by selecting the Depths & Elevations menu item of the Edit menu or clicking the left mouse button inside the depth or elevation column of the borehole log. After performing one of the above tasks, the Depth and Elevation form below will be displayed. This form has two tabs, one for depth information, and one for elevation information.

Depth Tab

The Depth tab shown above is used to enter and edit the following



information:

Start Depth: This is the start depth of the borehole, normally equal to 0 for ground surface. If you would like to show an aboveground well cover or "stick-up", enter a negative number. The units can be in either feet or meters depending upon the template settings.

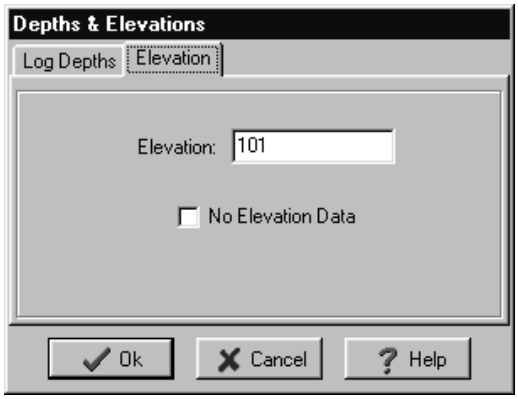
End Depth: This is the bottom depth of the borehole in the same units as specified in the template settings. There is no limit to the depth of the borehole.

Depth/Page: The vertical scale of the borehole log can be specified as a depth per page or as a depth scale. The depth per page specified in the template normally determines the plot depth per page; however, this can be overridden in the log by specifying a depth per page here. This feature allows you to change plot depths per page without changing the template. To accept the default template plot depth per page, specify the plot depth per page as zero when editing the log.

Depth Scale: The vertical scale of the borehole log can be specified as a depth per page or as a depth scale. The depth scale specified in the template normally determines the vertical scale; however, this can be overridden in the log by specifying a depth scale here. This feature allows you to change depth scales without changing the template. To accept the default template depth scale, specify the depth scale as zero when editing the log.

Elevation Tab

Borehole log elevations are usually (depending upon the template) displayed in a column in the main block of the log. If the elevation of the ground surface is entered, the program will automatically calculate and draw the elevations of all the lithologic layer boundaries in this column, or draw elevation tic marks depending upon the template. The units used to enter the elevations must be the same as the input depth units of the template.



The Elevation tab shown above is used to enter and edit the following information:

Elevation: The elevation of the borehole at ground surface in the same units as specified in the template.

No Elevation Data: If checked only the depths at each layer boundary will be shown. Otherwise, both the depth and elevation will be shown at each layer boundary.

Lithology

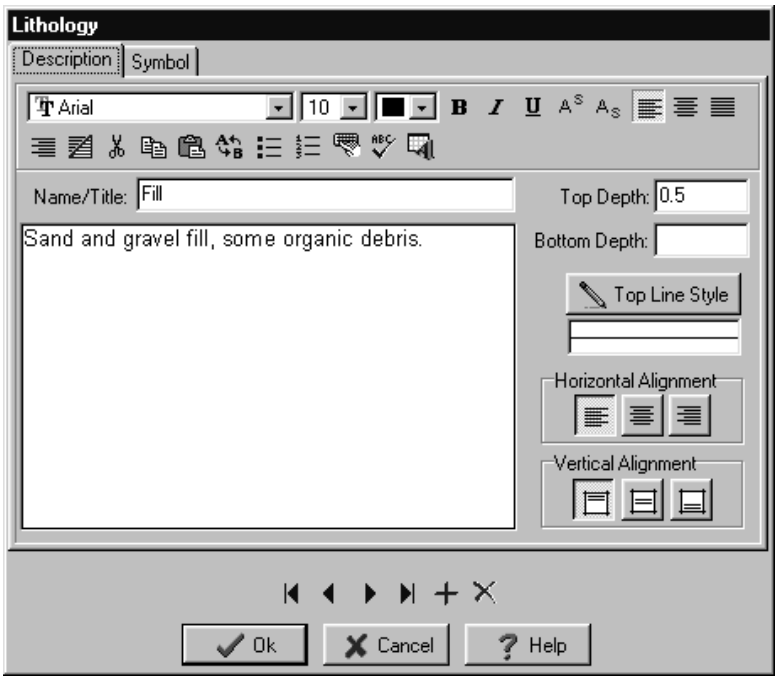
Lithologic layers are used to indicate the subsurface strata encountered during drilling. Boreholes can contain an unlimited number of lithologic layers. A lithologic layer primarily consists of:

- an optional title (up to 255 characters),
- description (no limit on the number of characters),
- a top depth,
- an optional bottom depth, and
- the symbol to use for the layer.

The bottom depth of the lithologic layer can either be specified or the top depth of the next lithologic layer is used. The lithologic descriptions are usually displayed in a Description column and the lithologic symbols are usually displayed in Symbol column.

The lithology of the borehole log can be entered and edited by selecting the Lithology menu item of the Edit menu or clicking the left mouse button inside the lithology description or lithology symbol columns of the borehole log.

After performing one of the above tasks, the Lithology form below will be displayed. This form has two or three tabs; one for lithology descriptions and one or two for lithology symbols.



The buttons at the bottom of the form are used for the following:

The **Start** button displays the first layer.

The **Previous** button displays the previous layer.

The **Next** button displays the next layer.

The **End** button displays the last layer.

The **Insert** button creates a new layer.

The **Delete** button deletes the layer.

Description Tab

The Description tab, shown on the previous page, is used to enter and edit lithology descriptions. The following information can be entered and edited using this tab:

Name/Title: The optional name of the layer (up to 255 characters) is displayed above the description. The font for the name is set in the template for the log.

Description: The description is used to describe the lithology of the layer. There is no limit to the length of the description. At the top of the tab there is a Rich Text toolbar that is used to format the description, add symbols, insert lithology macros, and perform spell checking on the description. The use of the Rich Text toolbar is described below.

Top Depth: This is the top depth of the layer and should be between the start and end depths of the borehole.

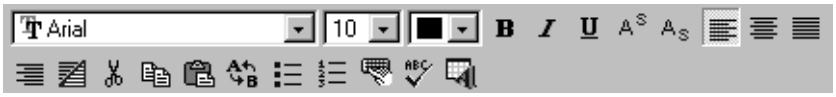
Bottom Depth: The bottom depth of the layer is optional. If it is not specified or is less than the top depth, the top depth of the next layer is used.

Top Line Style: Use the Top Line Style button to change the line style to be used for the top layer boundary. If the bottom depth is specified this line style is also used for the bottom boundary. When the button is pressed a Line Properties form is displayed. This form is used to set the line style, thickness, and color. The line style can be set to none to display no line at the boundary.

Horizontal Alignment: Use the horizontal alignment buttons to set the alignment of the layer title. The layer title can be left aligned, centered, or right aligned. The horizontal alignment of the description is set using the justification buttons in the Rich Text toolbar at the top of the tab.

Vertical Alignment: The three vertical alignment buttons are used to set the vertical alignment of the layer title and description. Using these buttons, the alignment can be set to the top, middle, or bottom of the layer.

At the top of the Description tab is the Rich Text toolbar, this toolbar can be used to modify the font characteristics, add symbols, spell check the description, and add lithology macros. Before selecting a speed button, the text to be modified should be selected with the mouse or the cursor should be placed at the desired insertion point.



The speed buttons of the toolbar perform the following functions:

The **Font Typeface** box is used to select the name of the font to use for the selected text.

The **Font Size** box is used to set the size of the font for the selected text.

The **Font Color** box is used to select the color of the font for the selected text.

The **Bold** button is used to toggle the bold attribute of the selected text on and off.

The **Italics** button is used to toggle the italic attribute of the selected text on and off.

The **Underline** button is used to toggle the underline attribute of the selected text on and off.

The **Superscript** button is used to toggle the superscript attribute of the selected text on and off.

The **Subscript** button is used to toggle the subscript attribute of the selected text on and off.

The **Left Justify** button will left justify the selected text.

The **Center Justify** button will center justify the selected text.

The **Right Justify** button will right justify the selected text.

The **Select All** button will select all of the text in the description.

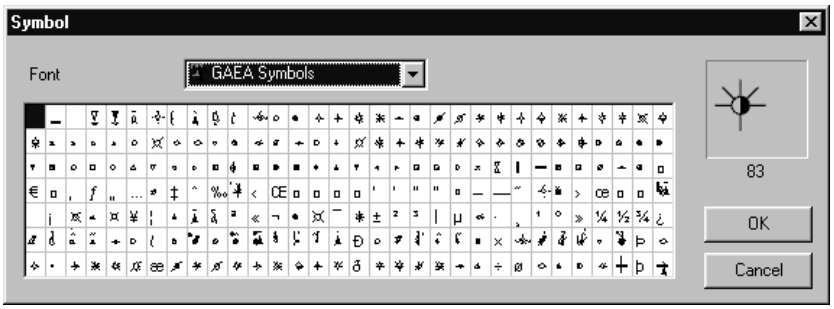
The **Cut** button will remove the selected text and place it in the clipboard.

The **Copy** button will copy the selected text to the clipboard.

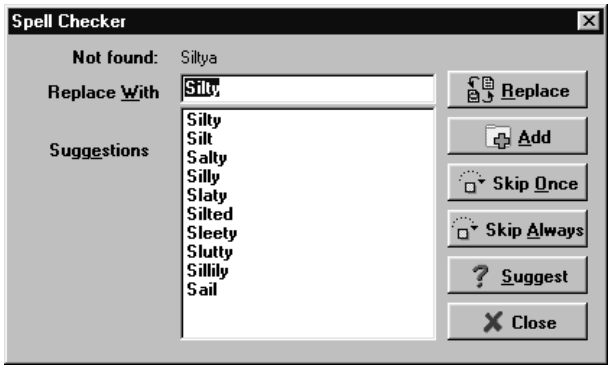
The **Paste** button will paste the text in the clipboard, at the current position of the cursor in the memo field.

The **Replace** button will replace the specified text in the description.

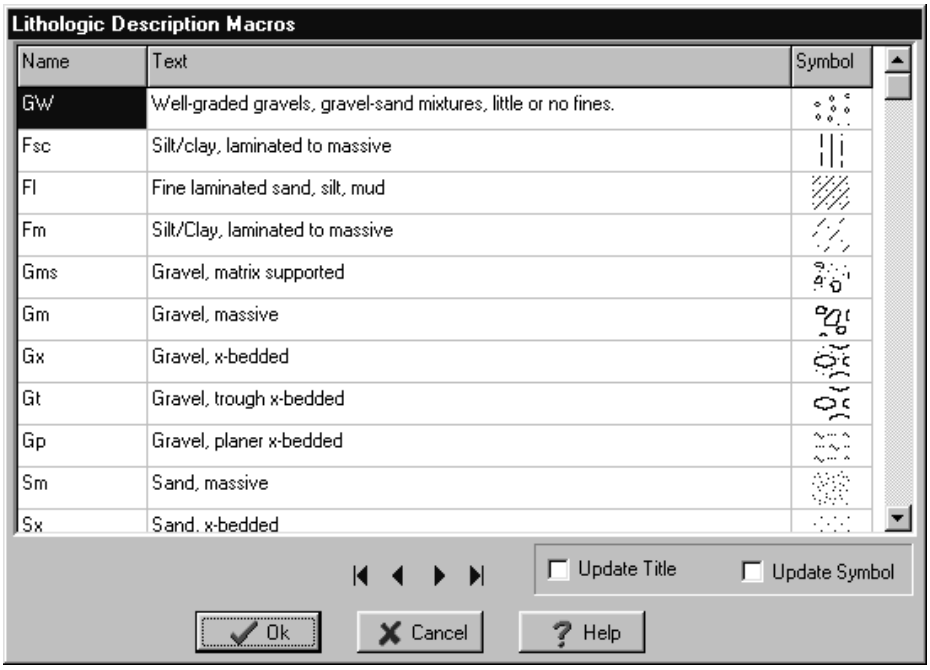
The **Symbol** button will display the Symbol form shown below. This form is used to place a symbol at the current cursor position in the description. To select a symbol use the Font box to select the font containing the symbol and then select the desired symbol. After the desired symbol has been selected, press the Ok button to insert it into the description. The WinLoG program comes with a font called "GAEA Symbols" that contains a variety of well and other symbols.



The **Spell Check** button will display the Spell Checker form shown below and will check the spelling in the description. The dictionary used to check the spelling is set in the program Preferences (see Chapter 3). When the Add button is pressed the word will be appended to the custom dictionary.



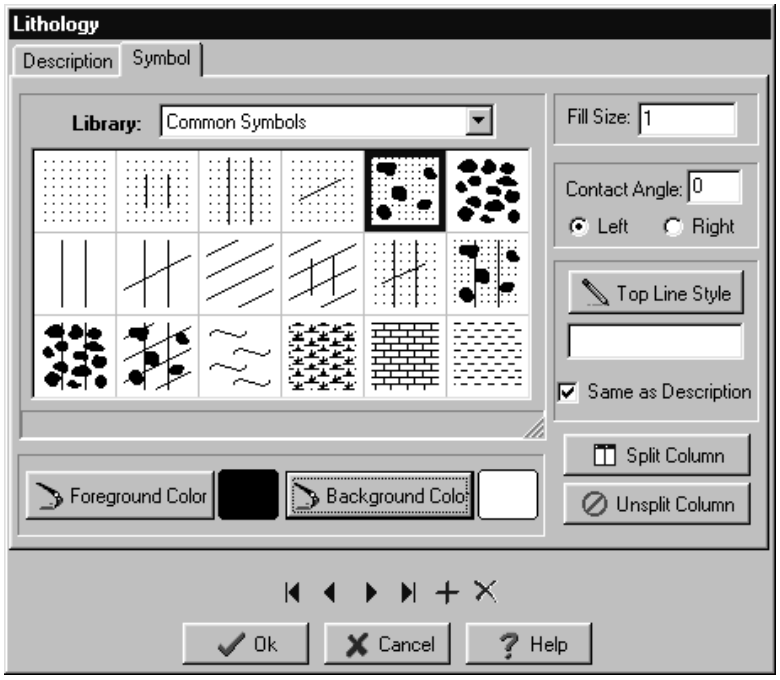
The **Macro** button will display the Lithology Description Macros form shown below. This form can be used to select a lithology macro to insert into the description. When the Ok button is pressed the selected text will be inserted into the description. In addition, by checking the Update Symbol box the lithology symbol for the layer will be set to the symbol for the macro selected.



Symbol Tab

Lithology symbols are stored in symbol libraries containing 18 symbols each. There is no limit to the number of libraries. The program comes supplied with numerous symbol libraries. These libraries can be edited and new libraries created using the Libraries submenu of the File menu. See Chapter 7 for a detailed description on how to create and edit symbol libraries.

The Symbol tab shown below is used to select the lithologic symbol for the layer. These symbols will appear in the lithology symbol column on the log. The symbol column can be optionally split vertically to display two different symbols.



The following information can be entered and edited using the Symbol tab:

Library: This combo box is used to select the symbol library for the layer. When the arrow at the right is pressed a list will display the available symbol libraries. After a library has been selected, the symbols displayed in the tab will be updated.

Symbol: The symbol for the layer can be selected by clicking on one of the 18 symbols displayed for the current library. The selected symbol is highlighted with a blue border.

Foreground Color: This is the color to use for the shaded parts of the symbol. The foreground color can be changed by pressing the Foreground Color button. When this button is pressed a Color form is displayed. Using this form, a basic color can be selected or a custom color can be specified.

Background Color: This is the color to use for the unshaded parts of the symbol. The background color can be changed by pressing the Background Color button. When this button is pressed a Color form is displayed. Using this form, a basic color can be selected or a custom color can be specified.

Fill Size: The fill size is used to expand or condense the symbol before it is drawn on the log. The size of the symbol is multiplied by the fill size and then the symbol is drawn. For example, a fill size of 2 will result in the symbol being doubled in size. The fill size must be greater than 0.

Contact Angle: This is the contact angle for the top of the layer and can be used to indicate gradational or dipping contacts. A contact angle of zero is used to specify a horizontal contact. The contact angle must be between -80 and +80.

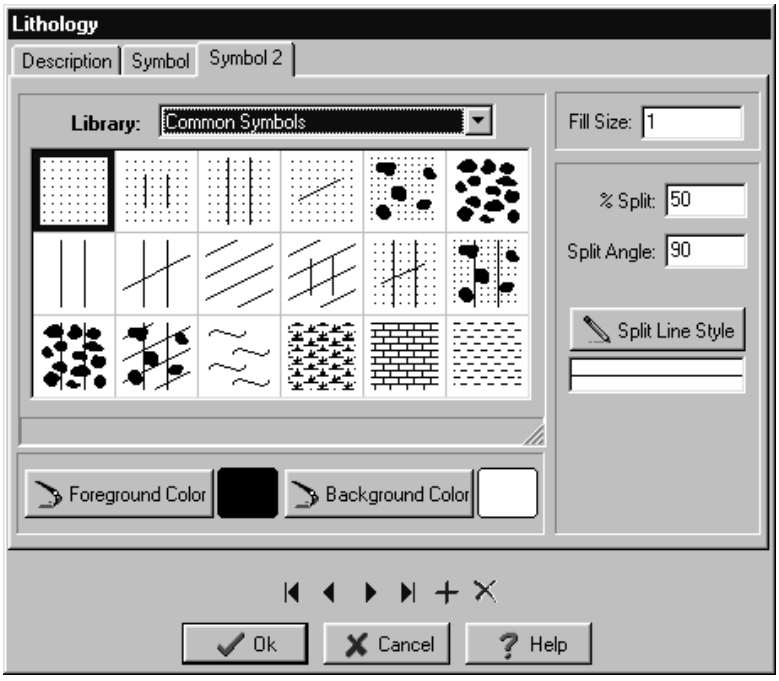
Left or Right: This is used to select whether the contact angle is specified from the left side of the symbol column or right side of the symbol column.

Top Line Style: The Top Line Style button is used to change the line style for the top layer boundary in the symbol column. If the bottom depth of the layer is specified this line style is also used for the bottom boundary. When the button is pressed, a Line Properties form is displayed. If the Same as Description box is checked, the line style will be set to the same as set in the Description tab for the layer.

Split Column: This button is used to divide the symbol column for the layer vertically and display two symbols for the layer. When the button is pressed the Symbol 2 tab below will be displayed. This tab can be used to select a second lithology symbol for the layer. The symbol selected in the Symbol tab will be displayed on the left side of the column and the symbol selected in the Symbol 2 tab will be displayed on the right side of the column.

Unsplit Column: This button is used to remove the second symbol from the layer and display only one symbol. When this button is pressed the Symbol 2 tab will disappear.

Symbol 2 Tab



Most of the information in the Symbol 2 tab is entered the same way as described in the Symbol tab above, except for the parameters below.

% Split: This is used to specify the percentage of the layer that is split between the two symbols. A 50% split would give create a layer using the left half of the symbol from the first symbol tab and the right half using the symbol from this tab. A 25% split would create a layer using a quarter of this symbol and three quarters of the symbol from the other tab.

Split Angle: This is used to specify the angle of the split between the first and second symbols. An angle of 90 degrees will show the symbols splitting vertically.

Split Line Style: This is used to specify the line style of the line between the two symbols. When the Split Line Style button is pressed a Line Properties form is displayed.

Adjusting the Layer Depth

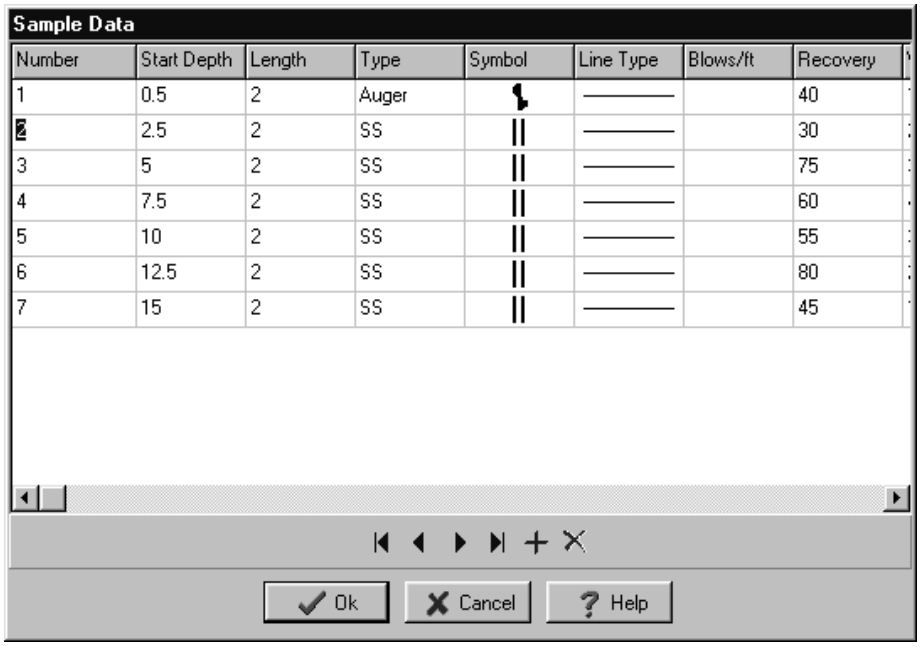
After a lithologic layer has been entered and the borehole log is displayed, the top depth of the layer can be adjusted using the mouse. Moving the cursor over the line at the top of lithologic layer, then while holding down the left mouse button, drag the top line of the layer to the desired depth.

Sample Data

Soil, rock, ice, and other samples are generally taken with split-spoon samplers, Shelby tubes, Core Barrels, etc. at various depths of the borehole. These samples are later used for detailed identification, lab analysis, and other purposes. An unlimited number of samples may be entered into a borehole log.

The samples of the borehole log can be entered and edited by selecting the Samples menu item of the Edit menu or clicking the left mouse button inside one of the sample columns of the borehole log. After performing one of the above tasks, the Sample Data form below will be displayed.

This form is used to enter and edit the data for each sample, that is then displayed in one or more columns of the borehole log. The template determines the type of information displayed on the borehole log for the sample.



The buttons at the bottom of the form are used for the following:

The **Start** button moves to the first sample.

The **Previous** button moves to the previous sample.

The **Next** button moves to the next sample.

The **End** button moves to the last sample.

The **Insert** button creates a new sample.

The **Delete** button deletes the sample.

The following information can be entered and edited using the Sample form:

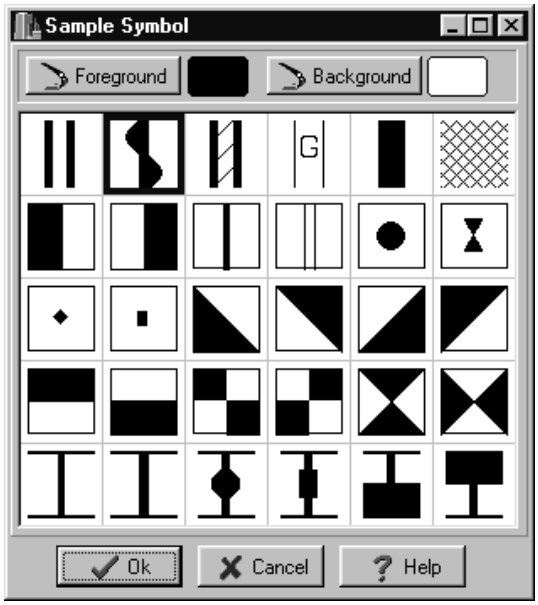
Number: This is the optional sample number (up to 255 characters). The number can contain text characters.

Start Depth: This is the start depth of the sample. The depth should be specified in the same units as set in the template. The start depth is the only field that must be specified for the sample all of the other information is optional.

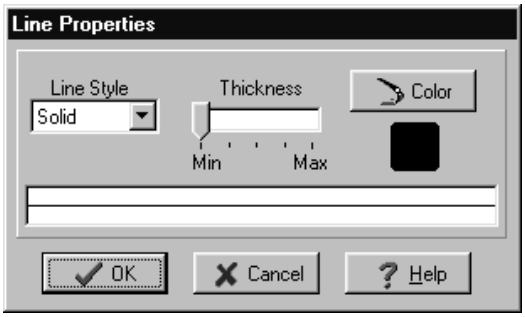
Length: This is the length of the sample. The length should be specified in the same units as set in the template. Initially when a sample is created the default length set in the template is displayed.

Type: This is the optional type of sample (up to 255 characters).

Symbol: This is an optional symbol used to represent the sample. When this column is selected, a button will be displayed for the sample symbol. After this button is pressed, the Sample Symbol form below is displayed. This form can be used to select the sample symbol, foreground color, and background color.



Line Type: This is the style of line that is used to draw the top and bottom boundaries of the sample. When this column is selected, a button will be displayed for the line type. After this button is pressed, the Line Properties form below is displayed. This form is used to set the line style, thickness, and color. The line style can be set to none to display no line at the boundaries.



Blows/ft: This is the blow count or N-Value of the sample. When entering N-Value data a line break can be added to the data by specifying a "/" between data values (e.g. 12/18/16/22). In addition, the 4 N-Values normally specified, can be spaced equally across the column by specifying a "^" at the beginning of the data. If the N-Value is left blank or specified as "NA" then it will not be plotted on the SPT graph (if there is an SPT graph in the log).

Recovery: This is the sample recovery, usually expressed as a percentage or as a length measurement. Depending upon the template settings the recovery can be represented on the log as text or as a shaded box that covers the specified portion of the sample interval. For example, if the recovery were 75% then a box covering 75% of the sample interval would be drawn.

Other: In addition to the above data, other types of data can be entered for each sample. The number of other data types and the names for this data is specified in the template. Other data is stored and displayed as text strings (up to 255 characters each). The name of the other data is specified as the column name. This string is displayed at the top of each other data column when the log is edited. To enter and edit this data the scroll bar at the bottom of the form should be used.

Well Data

WinLoG can display a wide variety of wells at varying levels of detail and complexity. Monitoring, extraction, injection, and almost any other type of well can be displayed on the borehole log. Well completion details and data can be displayed graphically in one or more columns of the borehole log. The borehole log can contain an unlimited number of well columns. In addition, depending upon the type of well column, the well may contain an unlimited number of casings and piezometers.

The style and input for monitoring wells has been changed significantly in this version of the WinLoG program. These changes were made to allow for greater flexibility and accuracy in drawing and annotating wells. In order to maintain compatibility with previous versions of the program, three different types of monitoring well columns can be specified in a template.

Well Type 1 columns were first introduced in version 1 of the program and can be used for very simple well displays. All of the well information is represented by bitmaps, which can be customized by the user. This type of well column cannot be used for wells with multiple piezometers or varying casing diameters, and cannot contain annotation.

Well Type 2 columns were first introduced in version 2 of the program and can be used for more complicated well displays. All of the casings/screens and fittings are drawn to scale by the program. This type of well column can be used for wells with varying casing and screen diameters, but cannot contain multiple piezometers or annotation.

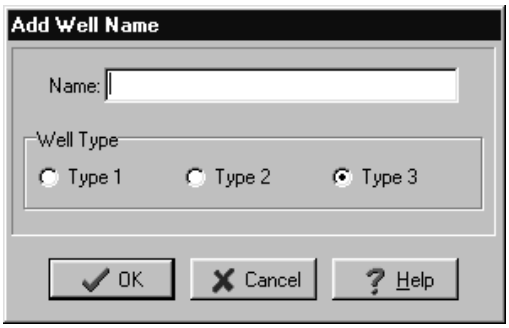
Well Type 3 columns are a new feature in this version of WinLoG and can be used to represent complicated well details. Almost all of the well information is drawn to scale; including casings, screens, covers, caps, and miscellaneous fittings. This type of well column can contain multiple piezometers, casings, and screens with variable diameters, annotation, and multiple water depths. Besides being able to represent very complicated wells, this type of well column is also very easy to use and is recommended for most well displays.

The data for each well column is grouped into datasets and stored according to the name of the well column. This allows for the display of more than one set of well data on a borehole log. If the name of the well column in the template is changed after the data is entered, the dataset will no longer be displayed in that column. You can change the name of the well dataset for the log to that in the template as described below.

When a new borehole log is created, well datasets will be automatically created for whatever well columns are specified in the template. The names of these well datasets will appear in the Well Data submenu of the Edit menu. It is also possible to create additional well datasets or delete well datasets as described below

Adding A Well

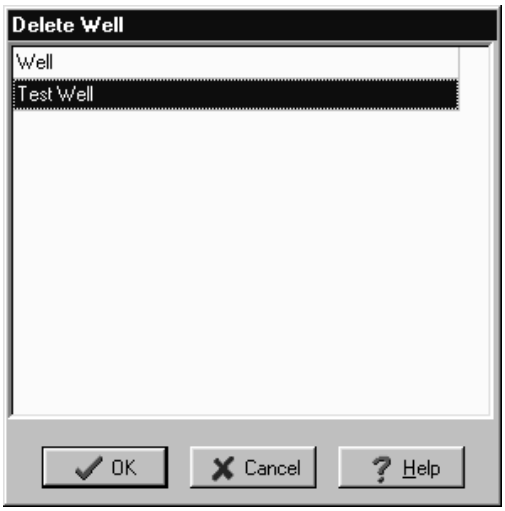
To add a new well dataset to a borehole log select the Add Well menu item of the Well Data submenu of the Edit menu. The Add Well Name form below will then be displayed. To add a new well dataset specify a unique name for the dataset and the type of dataset to create.



The well data for this dataset will not be displayed on the borehole log unless the template contains a well column with the same name**.**

Deleting a Well

To delete a well dataset from a borehole log select the Delete Well menu item of the Well Data submenu of the Edit menu. The Delete Well form below will be displayed. Select the well to be deleted and press the Ok button.



Well type 1 Column

Well Type 1 columns were first introduced in version 1 of the program and can be used for very simple well displays. All of the well information is represented by bitmaps, which can be customized by the user. This type of well column cannot be used for wells with multiple piezometers or varying casing diameters, and cannot contain annotation.

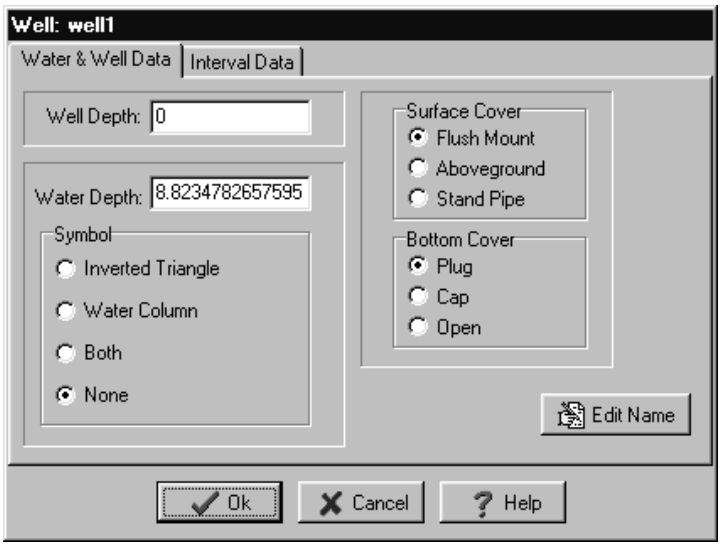
The data for a Well Type 1 column consists of:

- water depth,
- well depth,
- type of surface cap (above ground, flush mount, or stand pipe),
- type of bottom cap (plug, cap, open), and
- layers of risers and screens.

Note that the water depth, well depth, and types of top and bottom caps are the same for all of the well layers and need to be entered only once. The type of surface and bottom cap will be graphically depicted at the top and bottom of the monitoring well.

Well Type 1 data can be entered and edited by selecting the Well Data submenu of the Edit menu and the selecting the name of the well column or clicking the left mouse button inside the well column of the borehole log. After performing one of the above tasks, the Well Type 1 Data form below will be displayed. This form has two tabs; one for the water and general well data and one for specifying the risers and screens.

Water and Well Data Tab



The Water and Well Data tab, shown above, is used to enter and edit water level and general well data. The following information can be entered and edited using this tab:

Well Depth: This is the total depth of the well in the same units as set in the template.

Water Depth: This is the measured depth of the water table in the well in the same units as the well depth.

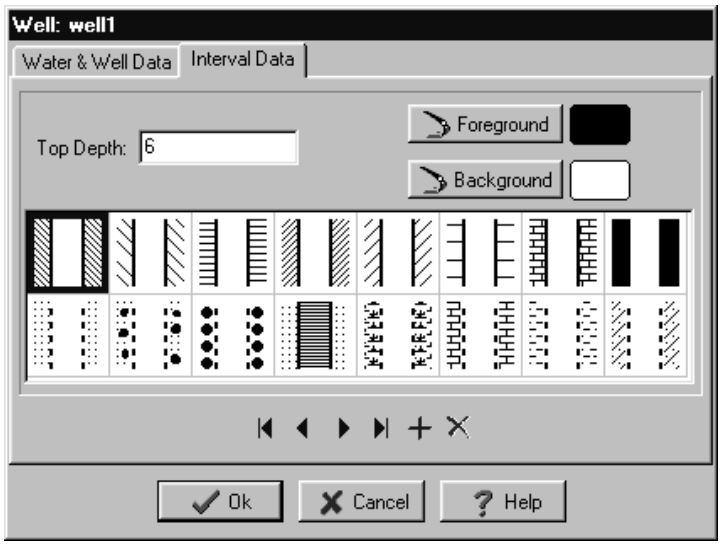
Symbol: This is type of symbol to use to depict the water table specified above.

Surface Cover: This is the type of symbol to use to depict the top of the well.

Bottom Cover: This is the type of symbol to use to depict the bottom of the well.

The name of the well dataset can be changed by clicking on the Edit Name button at the bottom of the tab. A new unique well name can then be entered in the Edit Well Name form. Changing the name of the well dataset will affect whether the well is displayed in the borehole log. For the well to be displayed the template must contain a well column with the same name.

Interval Data Tab



The Interval Data tab shown on the previous page is used to enter the layers of riser and screen pipes. The buttons at the bottom of the form are used for the following:

The **Start** button displays the first layer.

The **Previous** button displays the previous layer.

The **Next** button displays the next layer.

The **End** button displays the last layer.

The **Insert** button creates a new layer.

The **Delete** button deletes the layer.

The following information can be entered and edited using the Interval Data tab:

Top Depth: This is the top depth of the well interval layer in the same units as set in the template. The bottom depth will be the top depth of the next riser or screen, or the bottom depth of the well.

Symbol: This is the symbol to use for the well interval. One of the 16 symbols shown can be selected by clicking on it with the mouse.

Foreground Color: This is the color of the shaded region of the symbol. The color can be changed by clicking on the Foreground button. A Color form will then be displayed and either a basic or a custom color can be selected.

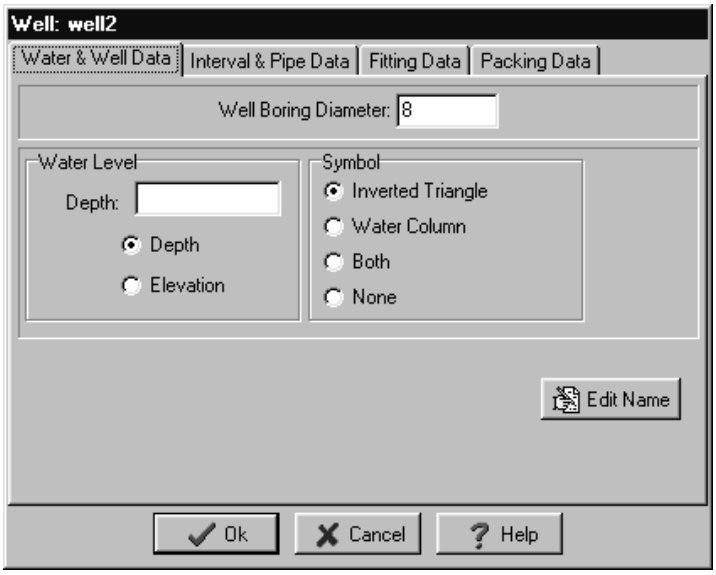
Background Color: This is the color of the unshaded region of the symbol. The color can be changed by clicking on the Background button. A Color form will then be displayed and either a basic or a custom color can be selected.

Well Type 2 Column

Well Type 2 columns were first introduced in version 2 of the program and can be used for more complicated well displays. All of the casings/screens and fittings are drawn to scale by the program. This type of well column can be used for wells with varying casing and screen diameters, but cannot contain multiple piezometers or annotation.

The data for a Well Type 2 column consists of general water and well data, and layers/intervals of pipes, fittings, and packing material.

Well Type 2 data can be entered and edited by selecting the Well Data submenu of the Edit menu and then selecting the name of the well column or clicking the left mouse button inside the well column of the borehole log. After performing one of the above tasks, the Well Type 2 Data form below will be displayed. This form has four tabs; one for the water and general well data, one for specifying the interval and pipe data, one for specifying the fittings for each interval, and one for specifying the packing material for each interval.



Before entering the screen and pipe intervals, the general information about the well should be entered.

Water and Well Data Tab

The Water and Well Data tab, shown on the previous page, is used to enter and edit water level and general well data. The following information can be entered and edited using this tab:

Well Boring Diameter: This is the diameter of the hole. The well diameter will be used to scale the screen and pipe within the column. For example, if the well diameter is specified as 10 inches, then a screen diameter of 4 inches will occupy 40% of the column width. By specifying these diameters, varying screen and pipe diameters can be represented in the monitoring well.

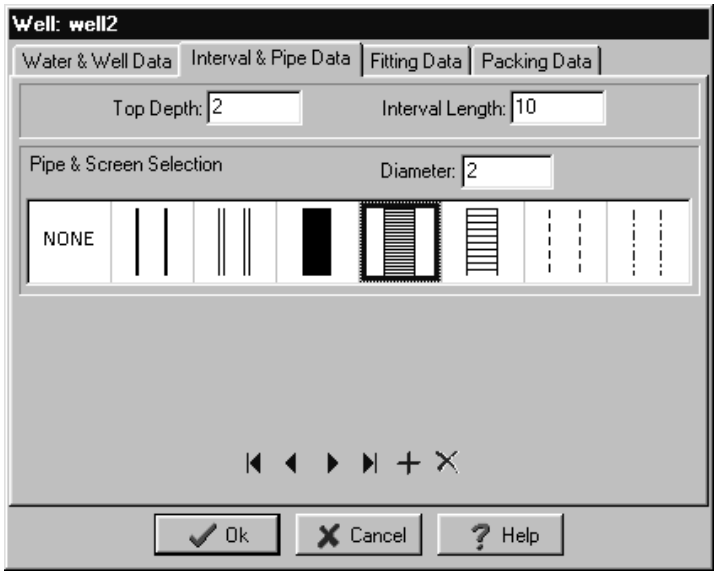
Water Level: This is the depth to the water table. The input units can be either depths or elevations, these units will be used for the input of the screen and pipe intervals as well.

Symbol: The symbol to use to draw the water table.

The name of the well dataset can be changed by clicking on the Edit Name button at the bottom of the tab. A new unique well name can then be entered in the Edit Well Name form. Changing the name of the well dataset will affect whether the well is displayed in the borehole log. For the well to be displayed the template must contain a well column with the same name.

Interval and Pipe Data Tab

The Interval and Pipe Data tab shown on the next page is used to enter the intervals of riser and screen pipes.



The buttons at the bottom of this tab and the Fitting Data and Packing Data tabs are used for the following:

The **Start** button displays the first interval.

The **Previous** button displays the previous interval.

The **Next** button displays the next interval.

The **End** button displays the last interval.

The **Insert** button creates a new interval.

The **Delete** button deletes the interval.

The following information can be entered and edited using this tab:

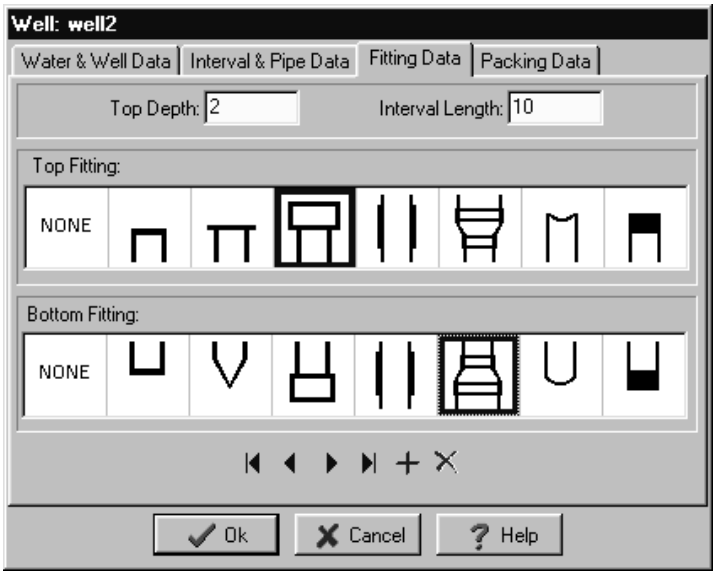
Top Depth: This is the top depth of the well interval/layer in the same units as set in the template. The bottom depth will be the top depth plus the interval length.

Interval Length: This is the length of the interval in the same units as the top depth.

Diameter: This is the diameter of the pipe or screen in the same units as the Well Diameter. The pipe diameter will be used to scale the size of the pipe in the column depending upon the well diameter that was previously entered. It is possible to have more than one size of pipe in the monitoring well, and to use the reducing and enlarging fittings to switch between pipe diameters.

Symbol: This is the symbol to use for the pipe or screen. One of the 8 symbols shown can be selected by clicking on it with the mouse.

Fitting Data Tab



The following information can be entered and edited using this tab:

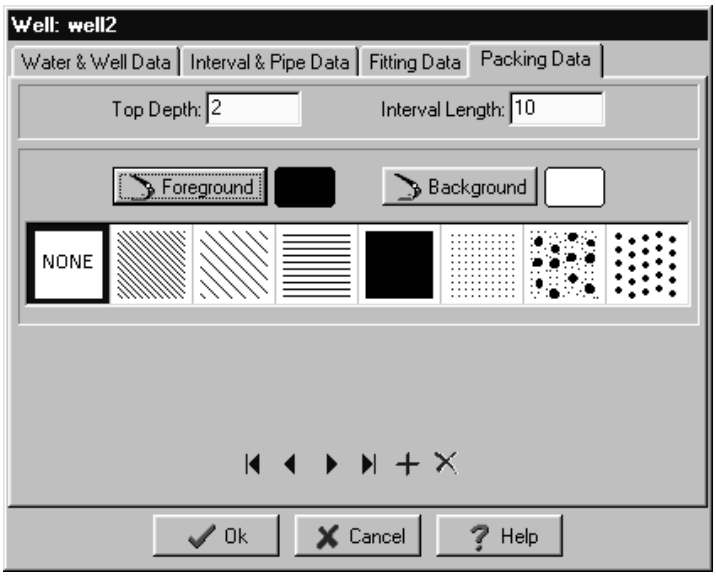
Top Depth: This is the top depth of the well interval/layer in the same units as set in the template. The bottom depth will be the top depth plus the interval length.

Interval Length: This is the length of the interval in the same units as the top depth.

Diameter: This is the diameter of the pipe or screen in the same units as the Well Diameter. The pipe diameter will be used to scale the size of the pipe in the column depending upon the well diameter that was previously entered. It is possible to have more than one size of pipe in the monitoring well, and to use the reducing and enlarging fittings to switch between pipe diameters.

Symbol: This is the symbol to use for the pipe or screen. One of the 8 symbols shown can be selected by clicking on it with the mouse.

Packing Data Tab



The following information can be entered and edited using the Packing Data tab:

Top Depth: This is the top depth of the well interval/layer in the same units as set in the template. The top depth of the interval must be entered on the Interval & Pipe Data tab.

Interval Length: This is the length of the interval in the same units as the top depth. The interval length must be entered on the Interval & Pipe Data tab.

Foreground Color: This is the color of the shaded region of the symbol. The color can be changed by clicking on the Foreground button. The Color form on the next page will then be displayed and either a basic or a custom color can be selected.

Background Color: This is the color of the unshaded region of the symbol. The color can be changed by clicking on the Background button. The Color form below will then be displayed and either a basic or a custom color can be selected.

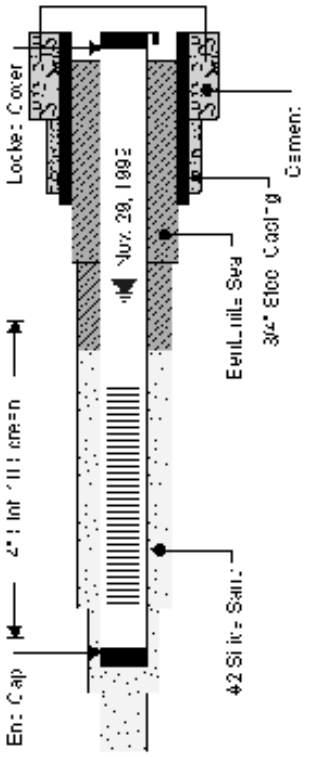
Symbol: This is the symbol to use for the packing material in this interval. One of the 8 symbols shown can be selected by clicking on it with the mouse.

Well Type 3 Column

Well Type 3 columns can be used to represent complicated well details. Almost all of the well information is drawn to scale; including casings, screens, covers, caps, and miscellaneous fittings. This type of well column can contain multiple piezometers, casings, and screens with variable diameters, annotation, and multiple water depths. Besides being able to represent very complicated wells, this type of well column is also very easy to use and is recommended for most well displays. An example of the type of well diagram that can be created is shown on the next page.

This data can be entered individually for each log or by using a well macro. Well macros can be used to quickly add standard well components, water level information, and text annotation to a log. Macros can be used for single well installation, complex nested wells, aboveground well casings, etc. All well macros are stored as Type 3 wells.

Well macros can also be created after the well data has been input for a log, using the "Save as Well Macro" button on the "Well" form. When this button is pressed a form will be displayed where you can specify the name of the well macro.



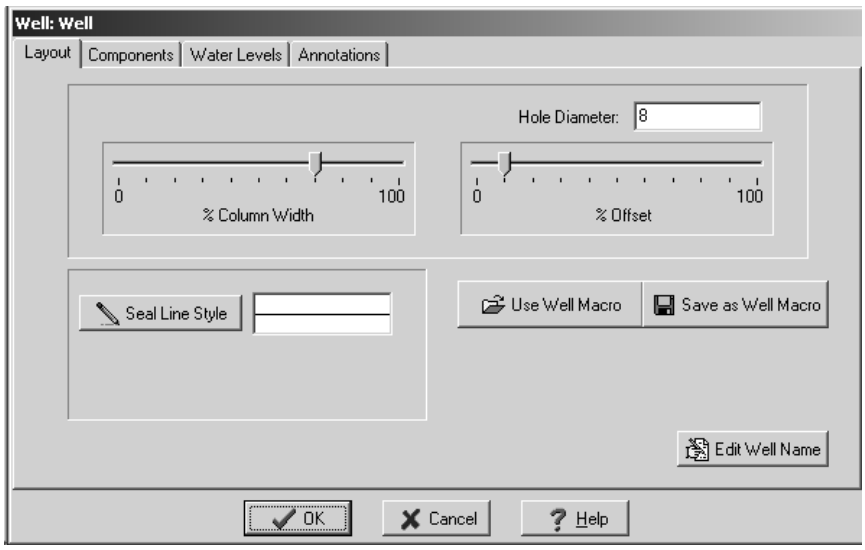
The data for a Well Type 3 column consists of:

- hole diameter and layout,
- well components,
- water level measurements, and
- annotation.

Well Type 3 data can be entered and edited by selecting the Well Data submenu of the Edit menu and then selecting the name of the well column or clicking the left mouse button inside the well column of the borehole log. After performing one of the above tasks, the Well Type 3 Data form on the next page will be displayed.

This form has four tabs; one for the hole diameter and layout, one for specifying the components, one for specifying the water levels, and one for specifying the annotation.

Before entering the details for the well, the hole diameter and layout of the well should be entered.



Layout Tab

The following information can be entered and edited using the Layout tab:

Hole Diameter: This is the diameter of the hole. The hole diameter will be used to scale and position the well components, water levels and annotation within the column.

% of Column Width: This is the percentage of the width of the column to use for the hole. The horizontal scale of the well column will then be set such that the hole diameter specified above is equal to this percentage of column width. When setting the % of Column Width space should be made on the sides of the hole for annotation.

% Offset: This is the percentage of the column width to offset the hole from the left side of the column. This parameter is used to position the hole inside the column. The sum of the % Offset and % of Column Width should always be less than or equal to 100. For example, if the % of Column Width is 70 and the % Offset is 10. Then the left most 10% of the column would be used for annotation, the next 70% of the column would contain the well components, and the last 20% of the column would be used for annotation.

Seal Line Style: This is the line style to use when drawing the edges around seal/packing and bottom seal components. When the Seal Line Style button is pressed a Line Properties form is displayed. This form is used to set the line style, thickness, and color. If the line style is set to None, no lines will be drawn around the seals.

The name of the well dataset can be changed by clicking on the Edit Name button at the bottom of the tab. A new unique well name can then be entered in the Edit Well Name form. Changing the name of the well dataset will affect whether the well is displayed in the borehole log. For the well to be displayed the template must contain a well column with the same name.

Components Tab

The Components tab shown on the next page is used to enter the well components. These components consist of covers, caps, casings/screens, seals/packing, bottom seals, joints, and miscellaneous fittings.

The buttons at the bottom of this tab are used for the following:

The **Start** button moves to the first component.

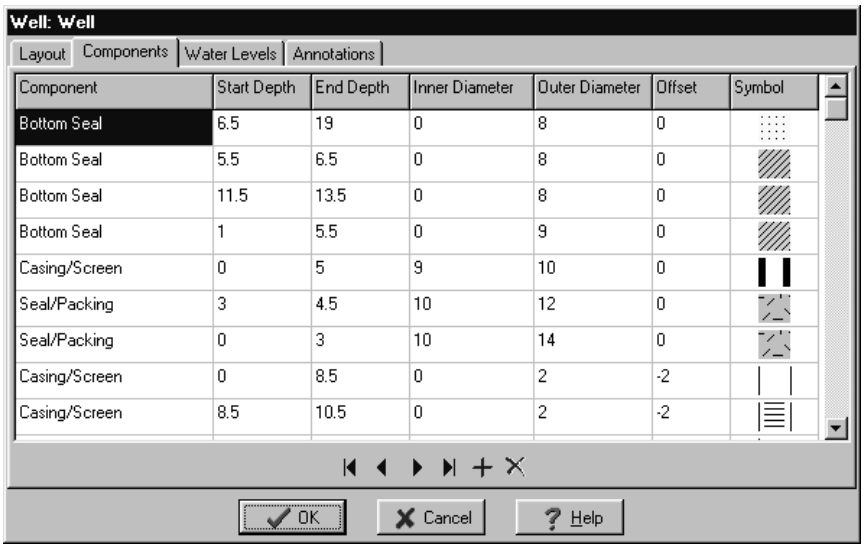
The **Previous** button moves to the previous component.

The **Next** button moves to the next component.

The **End** button moves to the last component.

The **Insert** button creates a new component.

The **Delete** button deletes this component.



The following information can be entered and edited using this tab:

Component: This is the type of well component. When the cursor is placed within this column, a combo box will be displayed. By clicking on the arrow to the right of this box, the type of component can be selected. The types of components that can be selected are Cover, Cap, Joint/Misc., Casing/Screen, Seal/Packing, and Bottom Seal.

Start Depth: This is the start depth of the component in the same units as set in the template.

End Depth: This is the end depth of the component

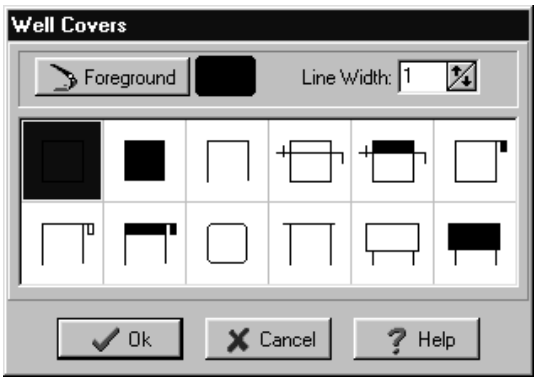
Inner Diameter: This is the inner diameter of the component. It is only used for Seal and some Casing/Misc. components. These components will be drawn such that the shading and symbol patterns will fill the gap between the inner and outer diameters of the component. The components that use the inner diameter are discussed under the appropriate symbol at the end of this section.

Outer Diameter: This is the outer diameter of the component and is used by all of the types of components. The outer diameter must be less than the hole diameter. The width of the component inside the well column is determined by the ratio of the outer diameter and hole diameter. For example; if the outer diameter is 2 inches and the hole diameter is 8 inches, then the components width would be ¼ of the hole width.

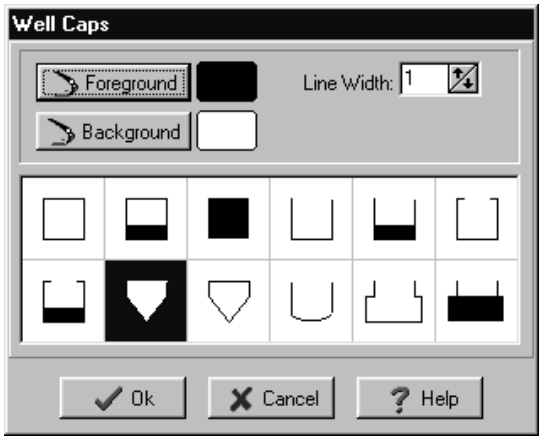
Offset: This is the offset of the component from the center of the hole. Offsets to the left are negative and offsets to the right are positive. By specifying an offset to the component, multiple casings and piezometers can be placed within a single well column. For example; to specify two piezometers in a hole 10 inches in diameter. One piezometer could have an offset of -3 inches and the other piezometer could have an offset of 3 inches. The first piezometer would then be between 2 and 4 inches on the left side of the hole, and the second piezometer would be between 2 and 4 inches on the right side of the hole.

Symbol: This is the symbol to use for the component. The symbols available will vary depending upon the type of component. When the cursor is clicked inside this column one of the forms below will be displayed, depending on the type of component.

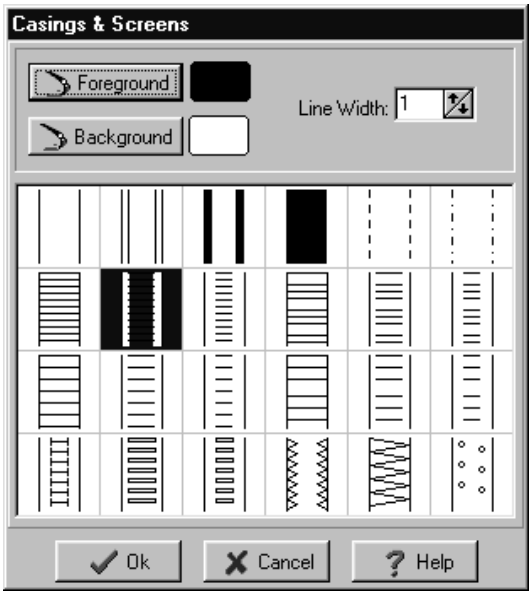
Cover: If the type of component is Cover then the Well Covers form on the next page will be displayed. Using this form the foreground color, line width, and symbol of the well cover can be selected.



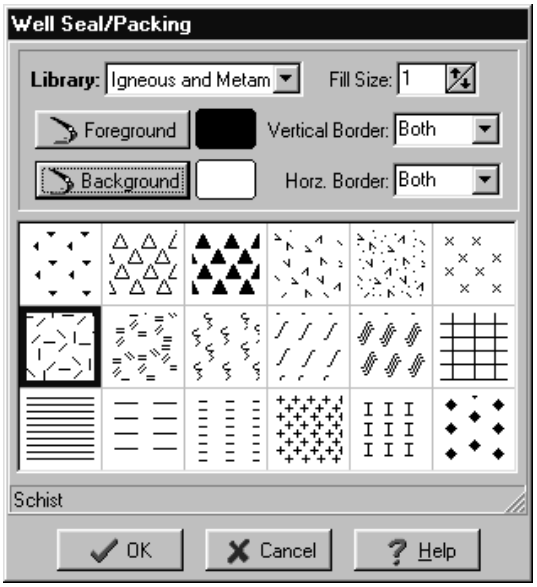
Cap: If the type of component is Cap then the Well Caps form below will be displayed. This form is used to select the foreground and background colors, line width, and symbol.



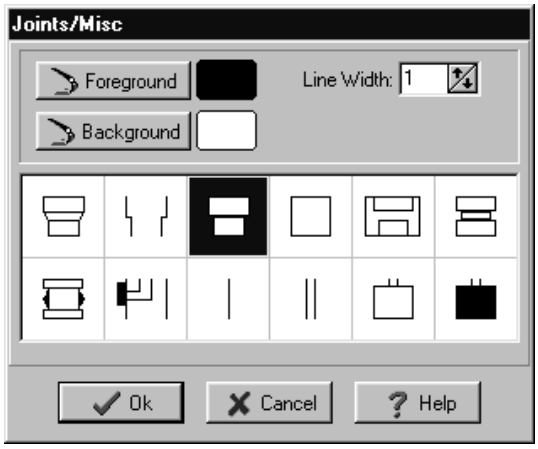
Casing/Screen: If the type of component is Casing/Screen then the Casings & Screens form below will be displayed. This form is used to select the foreground and background colors, line width, and symbol for the casing or screen. If the inner diameter is specified, these symbols will fill the gap between the inner and outer diameter with the background color. Except for the third symbol, which will fill the gap with the foreground color.



Seal/Packing or Bottom Seal : If the type of component is Seal/Packing or Bottom Seal then the Well Seal/Packing form below will be displayed. This form is used to select the lithologic library,foreground and background colors, line width, vertical and horizontal borders, and symbol for the seal or packing. The line style used for the vertical and horizontal borders is set in the Layout tab. If the component is not a Bottom Seal and the inner diameter is specified, these symbols will fill the gap between the inner and outer diameter with the selected symbol. A Bottom Seal will fill everything between the outer diameter and any interior components with the selected symbol.

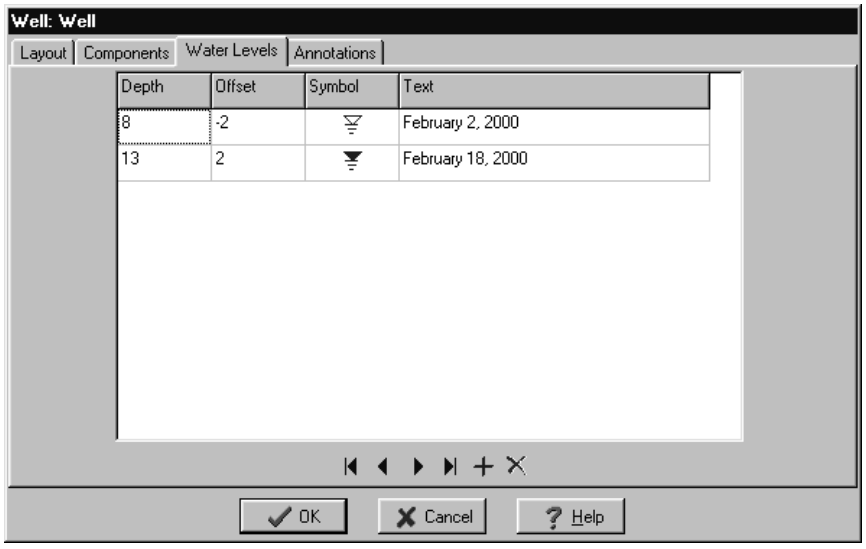


Joint/Misc.:If the type of component is Joint/Misc. then the Joints/Miscellaneous form on the next page will be displayed. This form is used to select the foreground and background colors, line width, and symbol. The first 6 symbols are used to represent couplings between pipes. All these couplings except for the 4th and 6th, will use the inner diameter as the bottom diameter of the connector. The bottom 6 symbols can be used for packers, sampling ports, cables, tubes, probes, and bailers. Of these 6 symbols, only the packer uses both the inner and outer diameters of the component.



Water Level Tab

The Water Levels tab shown below is used to enter the water levels measured in the well.



The buttons at the bottom of this tab are used for the following:

The **Start** button moves to the first water level.

The **Previous** button moves to the previous water level.

The **Next** button moves to the next water level.

The **End** button moves to the last water level.

The **Insert** button creates a new water level.

The **Delete** button deletes this water level.

The following information can be entered and edited using this tab:

Depth:This is the measured depth of the water level in the same units as set in the template.

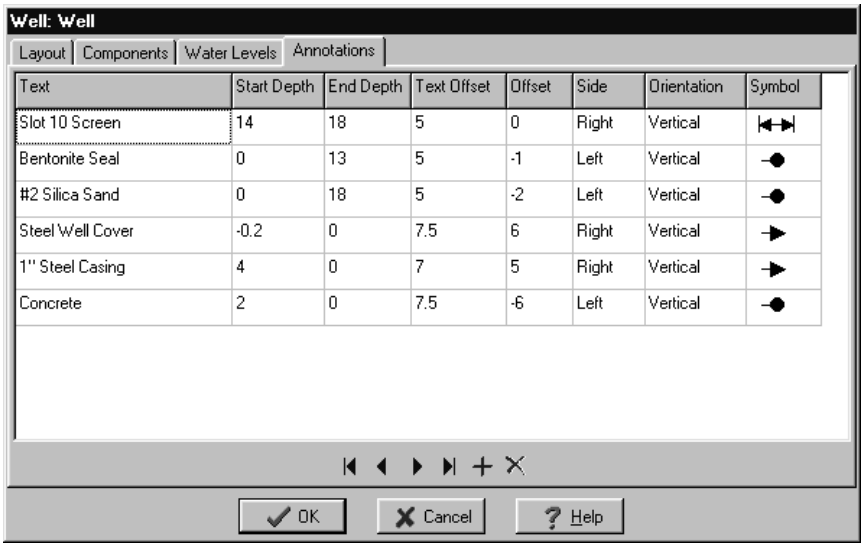
Offset: This is the offset to place the water level symbol from the center of the hole. Offsets to the left are negative and offsets to the right are positive.

Symbol: This is the symbol to use to represent the water table. When the cursor is clicked on this column, the Water Level Symbol form below is displayed. This form is used to select the symbol, symbol size, color, and line width.

Text: This is the text (up to 255 characters) to display above the water level symbol. The text will be oriented vertically above the symbol.

Annotations Tab

The Annotations tab shown below is used to enter the text describing the well completion details and other information.



The buttons at the bottom of this tab are used for the following:

The **Start** button moves to the first annotation.

The **Previous** button moves to the previous annotation.

The **Next** button moves to the next annotation.

The **End** button moves to the last annotation.

The **Insert** button creates a new annotation.

The **Delete** button deletes this annotation.

The following information can be entered and edited using this tab:

Text: This is the text to use for annotation (up to 255 characters).

Start Depth: This is the starting depth to display the text, the text will be positioned below this start depth. If the start depth is zero and the symbol type is not a double arrow, the start depth will be ignored and the end depth will be used to position the text.

End Depth: This is the end depth to use for displaying the text. The text will be positioned above this depth. If the end depth is zero and the symbol type is not a double arrow, the end depth will be ignored and the start depth will be used to position the text.

Text Offset: This is the offset to place the text from the center of the hole. The sign of the offset is ignored, and the Side is used to determine which side of the hole to place the text. In order for the text to appear outside of the well components, the text offset must be greater than the hole radius.

Offset: This is the offset used to position the start of the arrow or circle inside of the well components. Offsets to the left are negative and offsets to the right are positive. In order for the arrow or circle that leads to the text to start in the well components, the offset must be less than the hole radius.

Side: This is the side of the hole to place the text. When the cursor is clicked inside of this column, a combo box will be displayed, and either the left or right side can be selected.

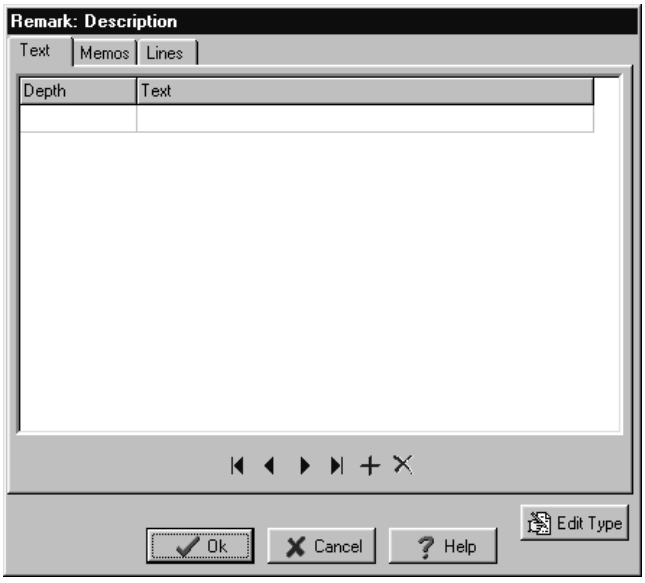
Orientation: This is the orientation of the text. When the cursor is clicked inside of this column, a combo box will be displayed and the orientation can be set to either horizontal or vertical.

Symbol: This is the symbol to use to draw the text leaders. When the cursor is clicked inside this column, the Annotation Symbol form below will be displayed. This form can be used to select the symbol type, symbol size, and line style. If the symbol type is Double Arrow and the text orientation is horizontal, the double arrows will not be drawn.

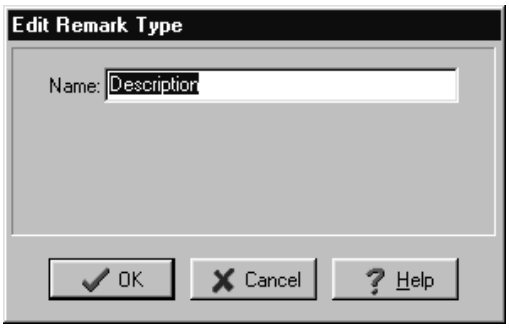
Remarks

Remark columns can be used to display any information that varies with depth; such as soil classification, RQD, chemical testing, lithologic consistency, laboratory results, drilling rates, etc. Borehole logs can contain an unlimited number of remark columns. Each remark column can contain an unlimited number of text lines.

Remarks can be entered and edited by selecting the Remarks submenu of the Edit menu and then selecting the name of the remarks column or clicking the left mouse button inside the remarks column of the borehole log. After performing one of the above tasks, the Remark form on below will be displayed. This form has three tabs; one for the text data, one for memo data, and one for line data.



The name of the remark dataset can be changed by clicking on the Edit Name button at the bottom of the tab. A new unique name can then be entered in the Edit Remark Type form shown below. Changing the name of the remark dataset will affect whether the remark dataset is displayed in the borehole log. For the remark dataset to be displayed the template must contain a remarks column with the same name.



Text Tab

The following information can be entered and edited using the Text tab shown on the previous page:

Depth: This is the depth to display the text in the same units as set in the template.

Text: This is the text to display (up to 255 characters). The default alignment of the text is set in the template. The alignment of each text line can be specified individually using the following codes.

[LEFT] - Text is aligned to the left.

[CENTRE] - Text is aligned in the centre.

[RIGHT] - Text is aligned to the right.

In addition to text, lines and symbols can be entered using the special codes below. When entering these codes, a number preceding the code will represent the percentage of the column width that the line or symbol should cover. For example, 50 [LEFTLINE] will draw a line from the left side of the column across 50% of the width of the column.

[LINE] - Horizontal line across the column.

[LEFTLINE] - Partial horizontal line across the column starting from the left.

[RIGHTLINE] - Partial horizontal line across the column starting from the right.

[CENTERLINE] - Partial horizontal line centered in the column.

[WATERLEVEL] - Water level symbol (inverted filled triangle) in the column.

[WATERSTRIKE] - Water strike symbol (inverted hollow triangle) in the column.

The recommended method for inserting lines and symbols is to use the Lines and Memos tabs.

The buttons at the bottom of this tab and the Memos tab are used for the following:

The **Start** button moves to the first remark.

The **Previous** button moves to the previous remark.

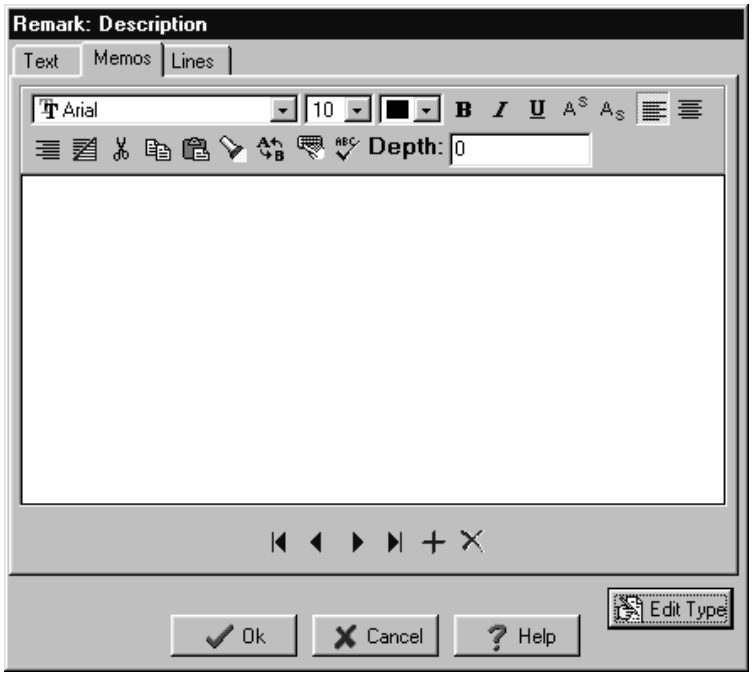
The **Next** button moves to the next remark.

The **End** button moves to the last remark.

The **Insert** button creates a new remark.

The **Delete** button deletes this remark.

Memos Tab



The following information can be entered and edited using the Memos tab shown above:

Depth: This is the depth to display the memo in the same units as set in the template.

Remark: This is the text to display. There is no limit to the length of the text. At the top of the tab there is a Rich Text toolbar that is used to format the text, add symbols, and perform spell checking on the text.

At the top of the Memos tab is the Rich Text toolbar, this toolbar can be used to modify the font characteristics, add symbols, and spell check the text. Before selecting a speed button, the text to be modified should be selected with the mouse or the cursor should be placed at the desired insertion point.

The speed buttons of the toolbar perform the following functions:

The **Font Type** face box is used to select the name of the font to use for the selected text.

The **Font Size** box is used to set the size of the font for the selected text.

The **Font Color** box is used to select the color of the font for the selected text.

The **Bold** button is used to toggle the bold attribute of the selected text on and off.

The **Italics** button is used to toggle the italic attribute of the selected text on and off.

The **Underline** button is used to toggle the underline attribute of the selected text on and off.

The **Superscript** button is used to toggle the superscript attribute of the selected text on and off.

The **Subscript** button is used to toggle the subscript attribute of the selected text on and off.

The **Left Justify** button will left justify the selected text.

The **Center Justify** button will center justify the selected text.

The **Right Justify** button will right justify the selected text.

The **Select All** button will select all of the text.

The **Cut** button will remove the selected text and place it in the clipboard.

The **Copy** button will copy the selected text to the clipboard.

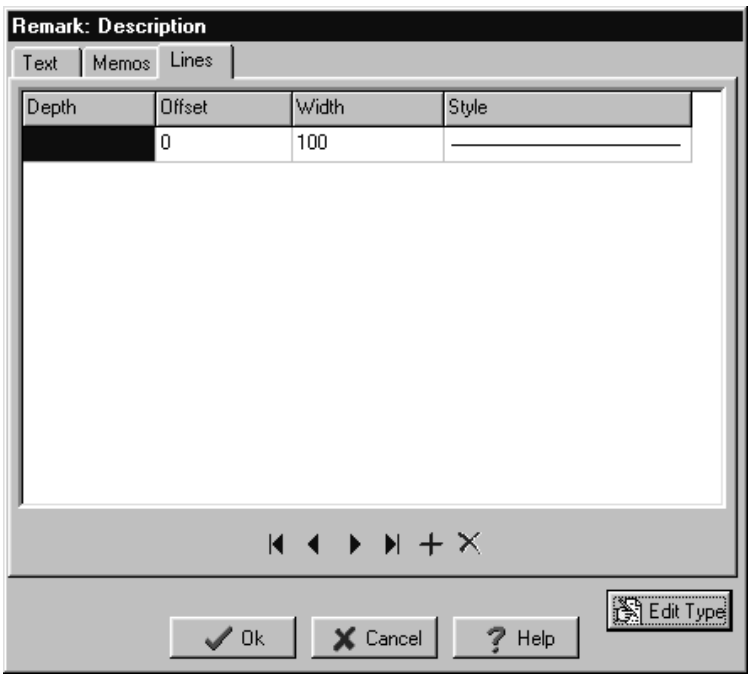
The **Paste** button will paste the text in the clipboard, at the current position of the cursor in the memo field.

The **Replace** button will replace the specified text.

The **Symbol** button will display the Symbol form. This form is used to place a symbol at the current cursor position in the text. To select a symbol use the Font box to select the font containing the symbol and then select the desired symbol. After the desired symbol has been selected, press the Ok button to insert it into the text. The WinLoG program comes with a font called "GAEA Symbols" that contains a variety of well and other symbols.

The Spell Check button will display the Spell Checker form and will check the spelling in the text. The dictionary used to check the spelling is set in the program Preferences (see Chapter 3). When the Add button is pressed the word will be appended to the custom dictionary.

Lines Tab



The following information can be entered and edited using the Lines tab shown above:

Depth: This is the depth to display the line in the same units as set in the template.

Offset: This is the percentage offset from the left side of the column to start to draw the line. For example, an offset of zero will start the line on the left side of the column and an offset of 50 will start the line in the center of the column.

Width: This is the width of the line, expressed as a percentage of the column width. For example, a width of 50 would draw a line halfway across the column width and a width of 100 would draw a line across the column. The width and offset should be less than or equal to 100.

Style: This is the style of the line. When this column is selected, a button will be displayed for the line type. After this button is pressed, the Line Properties form below is displayed. This form is used to set the line style, thickness, color.

The buttons at the bottom of this tab are used for the following:

The **Start** button moves to the first line.

The **Previous** button moves to the previous line.

The **Next** button moves to the next line.

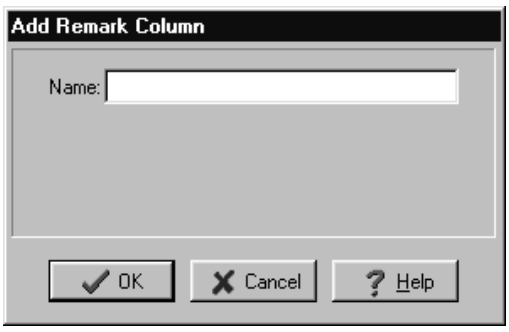
The **End** button moves to the last line.

The **Insert** button creates a new line.

The **Delete** button deletes this line.

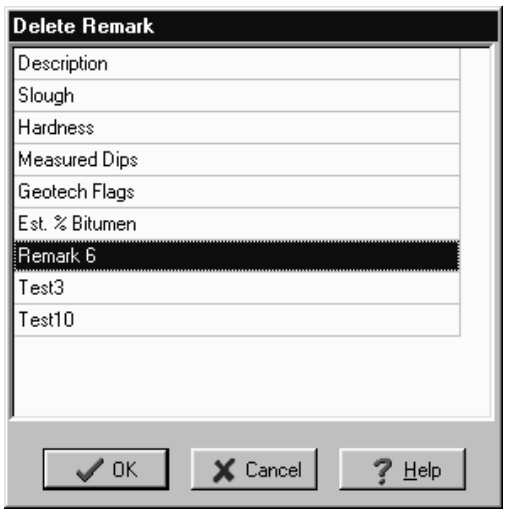
Adding A Remark

To add a new Remark column to a borehole log select the Add Remark menu item of the Remarks submenu of the Edit menu. The Add Remark Name form below will then be displayed. To add a new Remark dataset specify a unique name for the dataset and the type of dataset to create. The remark data for this dataset will not be displayed on the borehole log unless the template contains a Remark column with the same name**.**



Deleting a Remark

To delete a remark dataset from a borehole log select the Delete Remark menu item of the Remarks submenu of the Edit menu. The Delete Remark form below will be displayed. Select the remark data to be deleted and press the Ok button.



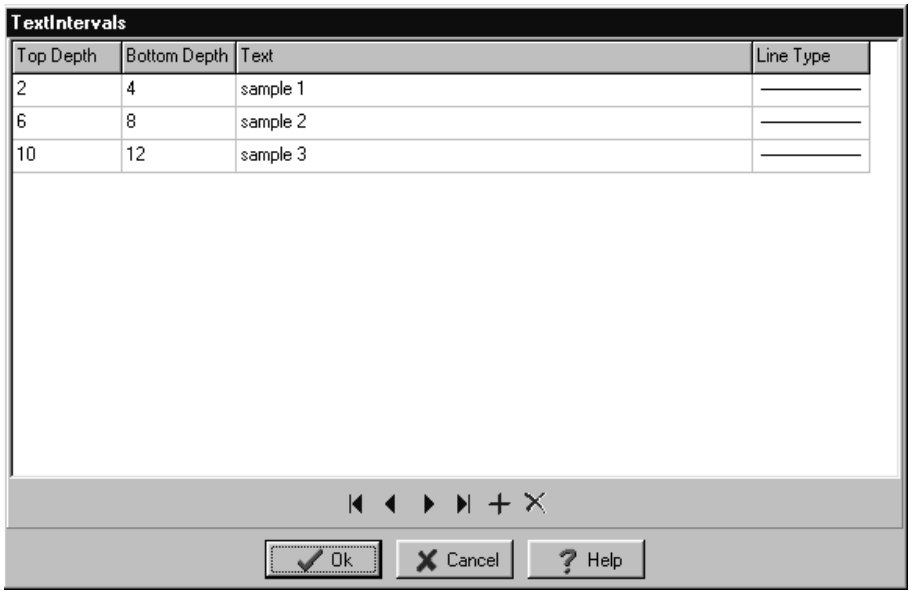
Text Interval Data

Text Interval columns are similar to Remark columns in that they can be used to display text at any depth. In Text Interval columns a top and bottom depth for the text is specified. An optional line can be drawn across the column at these top and bottom depths.

Text Interval columns can also be linked together so that the top and bottom depths only need to be specified once for all of the linked columns. This is useful for samples and laboratory results that are shown on several columns. Facies, Constituent, and Member columns can also be linked. The template for the borehole log specifies which columns are linked.

Text Interval columns can be entered and edited by selecting the Text Interval submenu of the Edit menu and then selecting the name of the column or by clicking the left mouse button inside the column on the borehole log. After performing one of the above tasks, either the Text Intervals form or the Linked Text Intervals form will be displayed.

Text Intervals Form



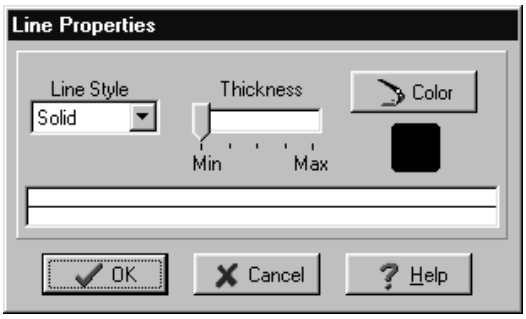
The following information can be entered and edited using the Text Intervals form shown above:

Top Depth: This is the top depth of the text interval. If a line is specified it will be drawn across the column at this depth.

Bottom Depth: This is the bottom depth of the text interval. If a line is specified it will be drawn across the column at this depth.

Text: This is the text to display in the column (up to 255 characters).

Line Type: This is the style of the line. When this column is selected, a button will be displayed for the line type. After this button is pressed, the Line Properties form below is displayed. This form is used to set the line style, thickness, color.



The buttons at the bottom of this form are used for the following:

The **Start** button moves to the first interval.

The **Previous** button moves to the previous interval.

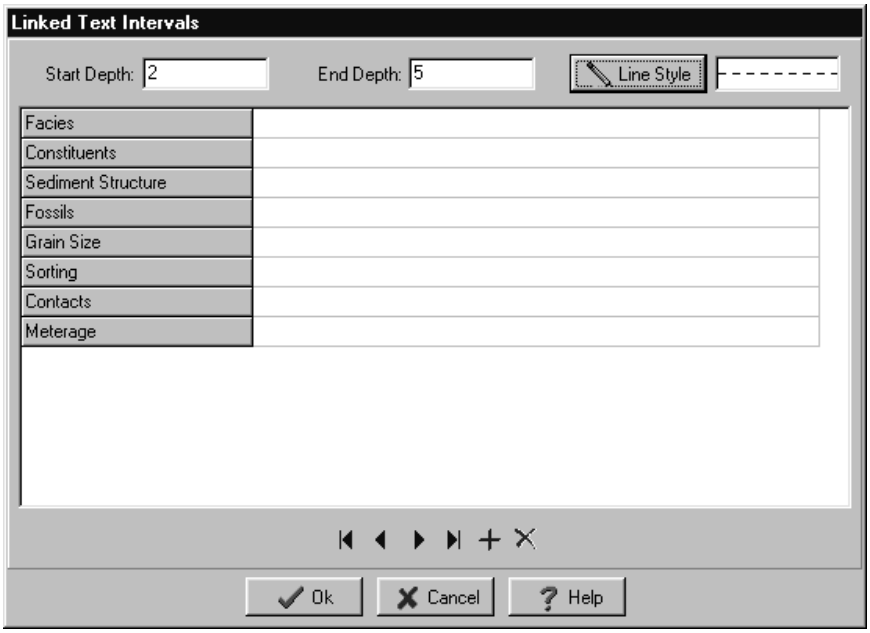
The **Next** button moves to the next interval.

The **End** button moves to the last interval.

The **Insert** button creates a new interval.

The **Delete** button deletes this interval.

Linked Text Intervals Form



The following information can be entered and edited using the Linked Text Intervals form shown above:

Top Depth: This is the top depth of the text interval. If a line is specified it will be drawn across the column at this depth.

Bottom Depth: This is the bottom depth of the text interval. If a line is specified it will be drawn across the column at this depth.

Text: This is the text to display in each of the linked columns (up to 255 characters). If the Facies, Constituents, or Members columns are linked to the text intervals they will also be displayed.

Line Type: This is the style of the line. When this column is selected, a button will be displayed for the line type. After this button is pressed, a Line Properties form is displayed. This form is used to set the line style, thickness, color.

The buttons at the bottom of this form are used for the following:

The **Start** button moves to the first interval.

The **Previous** button moves to the previous interval.

The **Next** button moves to the next interval.

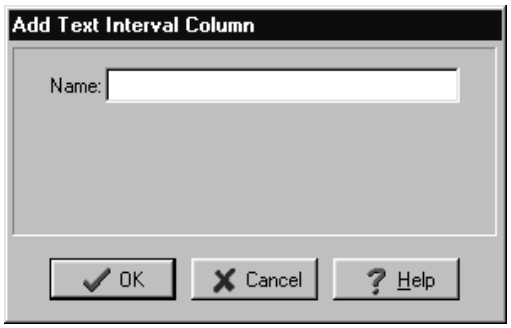
The **End** button moves to the last interval.

The **Insert** button creates a new interval.

The **Delete** button deletes this interval.

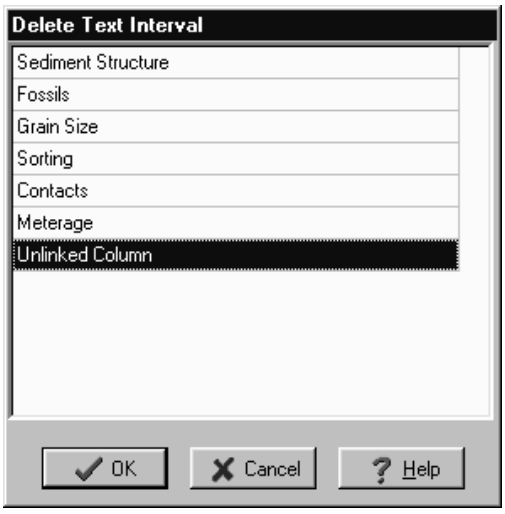
Adding A Text Interval Dataset

To add a new Text Interval dataset to a borehole log select the Add Text Interval Type menu item of the Text Intervals submenu of the Edit menu. The Add Text Interval Column form below will then be displayed. To add a new Text Interval dataset specify a unique name for the dataset and the type of dataset to create. The text interval data for this dataset will not be displayed on the borehole log unless the template contains a Text Interval column with the same name**.**



Deleting a Text Interval Dataset

To delete a text interval dataset from a borehole log select the Delete Text Interval Type menu item of the Text Intervals submenu of the Edit menu. The Delete Text Interval form below will be displayed. Select the dataset to be deleted and press the Ok button.



Facies Data

Facies data is treated the same way as text interval data. The entry and editing of the data is the same as described above. Facies columns can also be linked to text interval columns. If the Facies column is not linked, then the Facies form will be displayed for this column. This form is identical to the Text Interval form.

Constituents Data

Constituents data is treated the same way as facies and text interval data. The entry and editing of the data is the same as described above. Constituents columns can also be linked to text interval columns. If the Constituents column is not linked, then the Constituents form will be displayed for this column. This form is identical to the Text Interval form.

A specially designed font is provided with the WinLoG program for use with this column. The font is called GAEA Constituents and is shown below.

Key	Constituent Font	Definition
1	AK	Ankerite
2	B	Bentonite
3	Ca	Calcite
4	Do	Dolomite
5	••	Phosphate
6	6	Fossil
7	G	Glauconite
8	I	Iron Oxide
9	K	Kaolin
0	⏱	Armoured mud ball
a	M	Micaceous
b	△	Chert light
c	▲	Chert dark
d	✳	
e	P	Pyrite
f	Q	Authentic Quartz
g	✳	Bitumen
h	S	Siderite
i	↙	Carbonaceous debris
j	↙	Carbonaceous laminae
k	❨	Rip-up clasts
l	⬭	Nodule
m	⊙	Concretion
n	Y	Sulphur
o	Ba	Barite
p	Ah	Anhydrite

Members Data

Members data is treated the same way as facies and text interval data. The entry and editing of the data is the same as described above. Members columns can also be linked to text interval columns. If the Members column is not linked, then the Members form will be displayed for this column. This form is identical to the Text Interval form.

Key	Structures Font	Definition
1	1	Homogeneous
2	2	Current ripples
3	3	Climbing ripples
4	4	Wave ripples
5	5	Small scale cross-beds
6	6	Planar cross-beds
7	7	Truncated large scale cross-beds
8	8	Vague, horizontal, even parallel laminations
9	9	Inclined, even parallel laminations
0	0	Flaser
a	a	Lenticular
b	b	Wedge
c	c	Scour and fill
d	d	Depositional dip
e	e	Graded Bedding
f	f	Slickensided
g	g	Flame structure
h	h	Sand dyke
i	i	Stylolite
j	j	Mud cracks
k	k	Groove cast
l	l	Flute cast
m	m	Load cast
n	n	Convolute laminae or bedding
o	o	Convoluted and microfaulted
p	p	Bifurcated churned, contorted, swirls
q	q	Fault, vertical
r	r	Joint
s	s	Rootlets or root casts
t	t	Burrow
u	u	Dyke-like intrusion
v	v	Trail
w	w	Even parallel continuous
x	x	Even parallel discontinuous
y	y	Even non-parallel continuous
z	z	Even non-parallel discontinuous
;	;	Fault, inclined
/	/	Wavy parallel discontinuous
?	?	Wavy parallel continuous
H	H	Wavy non-parallel discontinuous
J	J	Wavy non-parallel continuos

A specially designed font is provided with the WinLoG program for use with this column. The font is called GAEA Structures and is shown below.

Graph Data

Graph data can be used to display any information that varies with depth; such as shear strength, water content, hydraulic conductivity, contaminant concentrations, volatile hydrocarbon readings, etc. There is no limit to the number of graphs that can be displayed in a borehole. Each graph can contain an unlimited number of points.

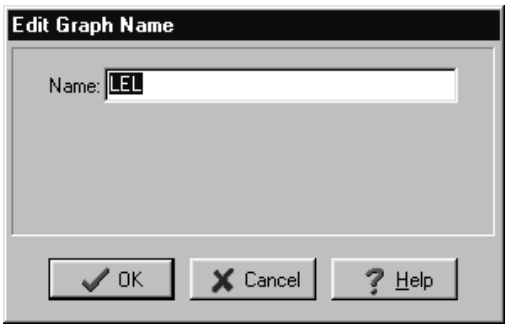
There are three types of graphs that can be used to display data. These are single graphs, double graphs, and bar graphs (histograms). The type of graph and its display format are set in the template.

In addition to the graphs above, borehole logs can contain SPT and Water Content graphs. SPT graphs are used to display the N-Values entered in the Sample Data. These graphs are generated automatically by the program. Water Content graphs are used to display water contents and Atterberg limits. The data entry for Water Content graphs is described in the Water Content section below.

Graph data can be entered and edited by selecting the Graph Data submenu of the Edit menu and the selecting the name of the graph or by clicking the left mouse button inside the graph of the borehole log.

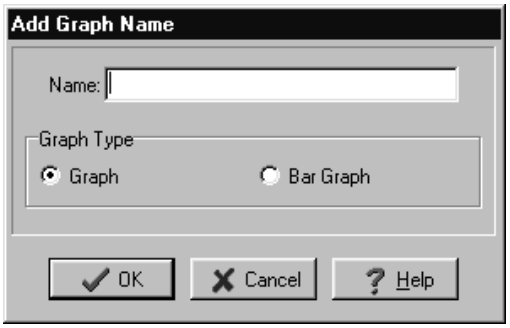
After performing one of the above tasks, one of the Graph forms below will be displayed depending on the type of graph. If the graph type for the column is a double graph and the Edit menu or Popup menu is used to edit the graph data, only the data for the one graph selected will be displayed.

The name of the graph can be changed by clicking on the Edit Name button at the bottom of the tab. A new unique name can then be entered in the Edit Graph Name form shown below. Changing the name of the graph will affect whether the graph is displayed in the borehole log. For the graph to be displayed the template must contain a graph column with the same name.



Adding a Graph

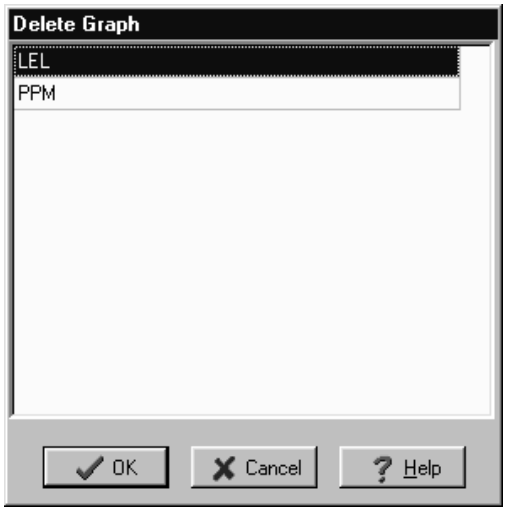
To add a new graph to a borehole log select the Add Graph menu item of the Graph Data submenu of the Edit menu. The Add Graph Name form below will then be displayed. To add a new graph specify a unique name for the dataset and the type of graph to create.



The graph data will not be displayed on the borehole log unless the template contains a graph column with the same name.

Deleting a Graph

To delete a graph from a borehole log select the Delete Graph menu item of the Graph Data submenu of the Edit menu. The Delete Graph form below will be displayed. Select the graph to be deleted and press the Ok button.

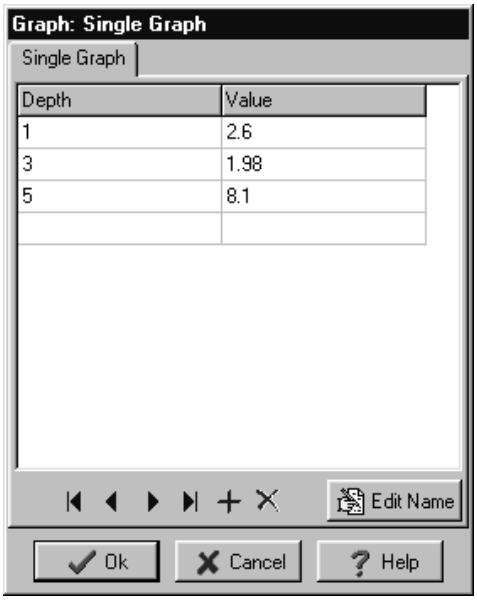


Single Graphs

If the graph type is single or the Edit or popup menus are used to edit a double graph, the Graph form on the next page will be displayed. The following information can be entered and edited using this form:

Depth: This is the depth of the data point in the same units as set in the template.

Value: This is the value of the data point in the same units as set in the template.



The buttons at the bottom of this form and the other graph data forms are used for the following:

The **Start** button moves to the first data point.

The **Previous** button moves to the previous data point.

The **Next** button moves to the next data point.

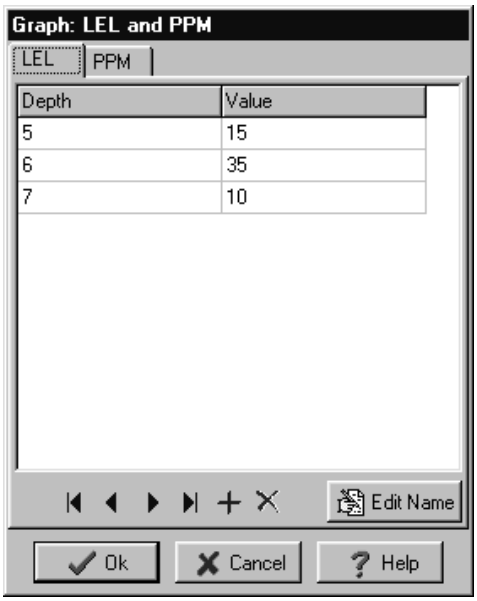
The **End** button moves to the last data point.

The **Insert** button creates a new data point.

The **Delete** button deletes this data point.

Double Graphs

If the graph type is double and the graph is selected by clicking on the column, the Graph form below will be displayed. This form has two tabs, one for each graph. The data entry for the tabs is identical, the data on the first tab is displayed for the first graph and likewise for the second tab.



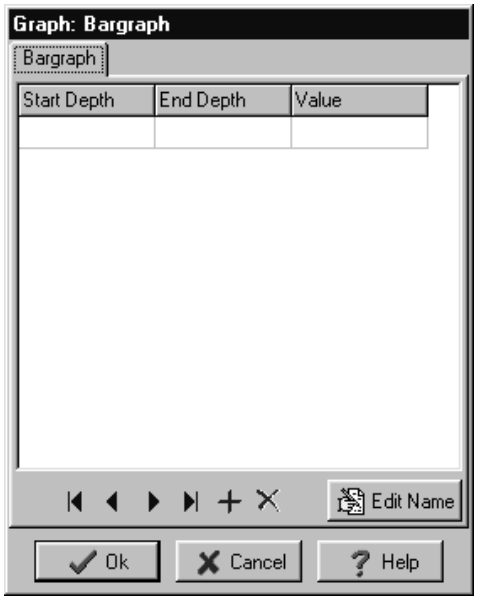
The following information can be entered and edited for each tab:

Depth: This is the depth of the data point in the same units as set in the template.

Value: This is the value of the data point in the same units as set in the template.

Bar Graphs

If the graph type is a bargraph (histogram), the Graph form below will be displayed.



The following information can be entered and edited for the bargraph:

Start Depth: This is the start depth of the bar in the same units as set in the template.

End Depth: This is the end depth of the bar in the same units as the template.

Value: This is the value of the bar in the same units as set in the template.

Water Content Data

Water Content graphs are used to display water contents and Atterberg limits. Water Content data can be entered and edited by selecting the Water Content Data menu item of the Edit menu or by clicking the left mouse button inside the Water Content graph of the borehole log. After performing one of the above tasks, the Water Content form below will be displayed.

The buttons at the bottom of this form are used for the following:

The **Start** button moves to the first data point.

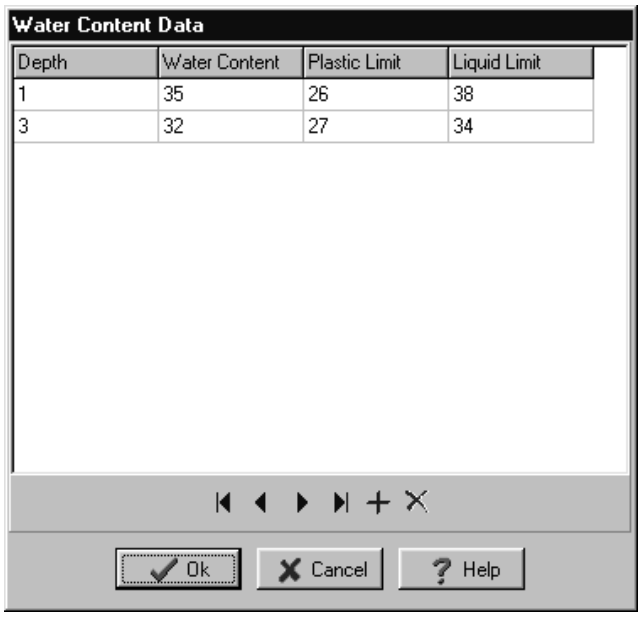
The **Previous** button moves to the previous data point.

The **Next** button moves to the next data point.

The **End** button moves to the last data point.

The **Insert** button creates a new data point.

The **Delete** button deletes the current data point.



The following information can be entered and edited for the water contents:

Depth: This is the depth of the water content measurement in the same units as set in the template.

Water Content: This is the water content of the sample.

Plastic Limit: This is the plastic limit of the sample.

Liquid Limit: This is the liquid limit of the sample.

Symbol and Core Log Data

Symbol and core logs are used to represent lithologic samples collected in a borehole, that do not necessarily correspond with any lithologic layers. There can be any number of symbol logs and only one core log for a borehole. The lithologic symbols shown are independent of those specified in the lithology.

The data can be entered and edited by selecting the Symbol or Core Log menu items of the Edit menu or by clicking the left mouse button inside the Symbol or Core Log of the borehole log. After performing one of the above tasks, the Symbol or Core Log form shown on the next page will be displayed.

The buttons at the bottom of the form are used for the following:

The **Start** button displays the first sample.

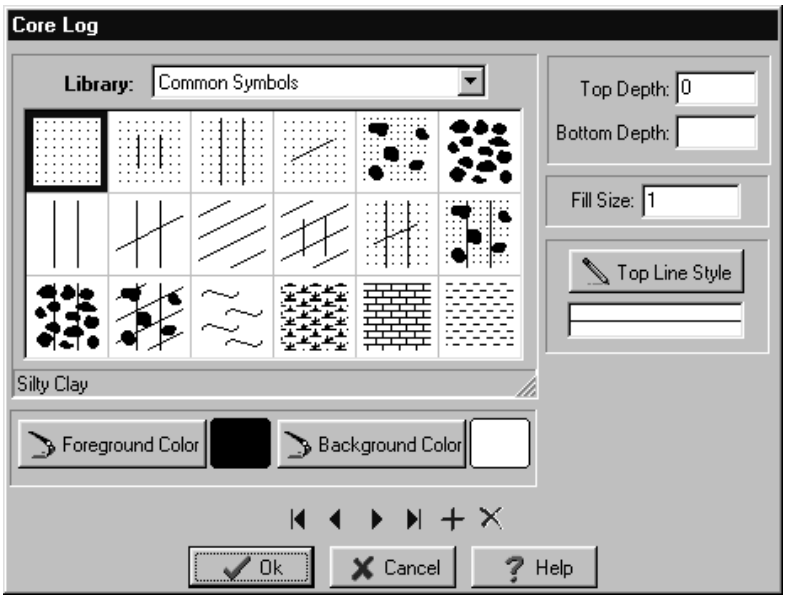
The **Previous** button displays the previous sample.

The **Next** button displays the next sample.

The **End** button displays the last sample.

The **Insert** button creates a new sample.

The **Delete** button deletes the sample.



The following information can be entered and edited using this form:

Top Depth: This is the top depth of the sample and should be between the start and end depths of the borehole.

Bottom Depth: The bottom depth of the sample is optional. If it is not specified or is less than the top depth, the top depth of the next sample is used.

Library: This combo box is used to select the symbol library for the sample. When the arrow at the right is pressed a list will display the available symbol libraries. After a library has been selected, the symbols displayed will be updated.

Symbol: The symbol for the sample can be selected by clicking on one of the 18 symbols displayed for the current library. The selected symbol is highlighted with a blue border.

Foreground Color: This is the color to use for the shaded parts of the symbol. The foreground color can be changed by pressing the Foreground Color button. When this button is pressed a Color form will be displayed. Using this form, a basic color can be selected or a custom color can be specified.

Background Color: This is the color to use for the unshaded parts of the symbol. The background color can be changed by pressing the Background Color button. When this button is pressed the Color form is displayed. Using this form, a basic color can be selected or a custom color can be specified.

Fill Size: The fill size is used to expand or condense the symbol before it is drawn on the log. The size of the symbol is multiplied by the fill size and then the symbol is drawn. For example, a fill size of 2 will result in the symbol being doubled in size. The fill size must be greater than 0.

Top Line Style: The Top Line Style button is used to change the line style for the top sample boundary in the symbol column. If the bottom depth of the sample is specified this line style is also used for the bottom boundary. When the button is pressed, the Line Properties form described in the Description tab is displayed. If the Same as Description box is checked, the line style will be set to the same as set in the Description tab for the sample.

Geophysical Data

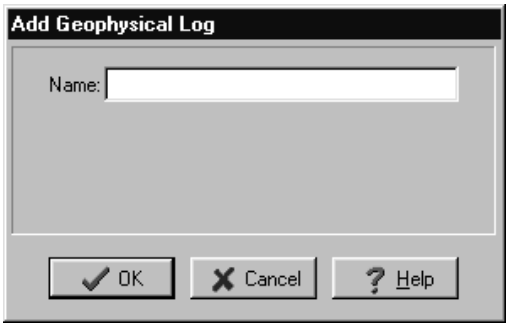
A wide variety of geophysical logs can be displayed as graphs. An unlimited number of geophysical logs can be displayed in a borehole log, and there is no limit on the number of points each geophysical log can contain. A column can contain either one or two geophysical logs, which is set in the template for the log.

To display a geophysical log in a borehole log, it the file containing the geophysical log must be imported. After the file has been imported, the geophysical data can be displayed and edited. Any editing of the geophysical data will only affect the imported data, and will not affect the original data in the geophysical file.

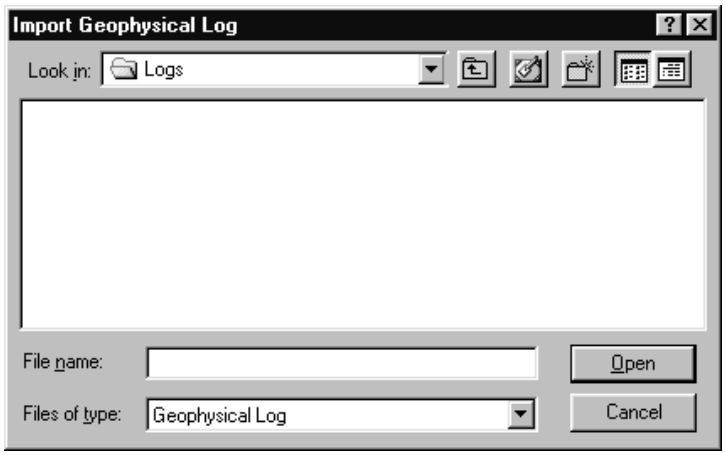
Importing Geophysical Data

If no geophysical data has previously been imported for the column, click on the geophysical column on the log to import data or select the Add Geophysical Log menu item from the Geophysical Data submenu.

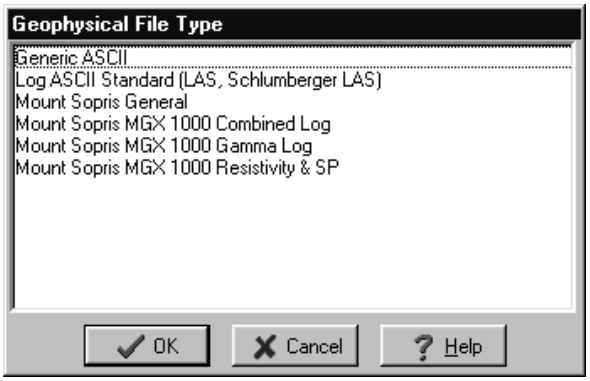
If the Add Geophysical Log menu item is selected the form below will be displayed. Enter the name of the geophysical log and press the Ok button.



The Import Geophysical Log form below will be displayed. Select the file containing the geophysical log and then press the Open button.

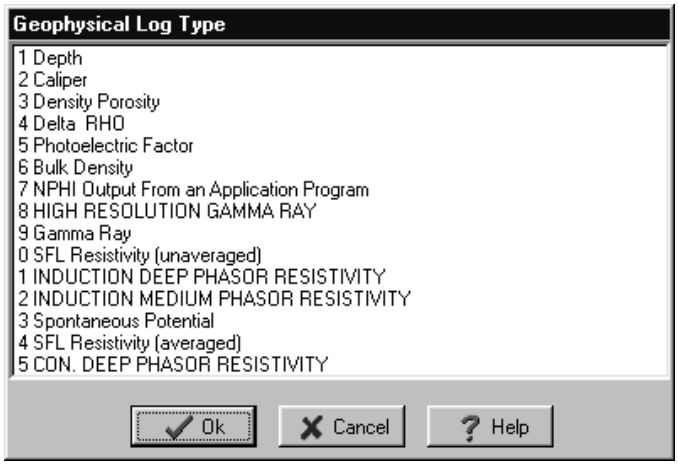


Once the file name has been specified the format of the geophysical log needs to be selected from the Geophysical File Type form shown below. Several types of file formats are shown, if the format of your log is not shown try to use the Generic ASCII format; otherwise, contact GAEA to see if support for that format can be added. Select the format of the geophysical log file and then press the OK button.

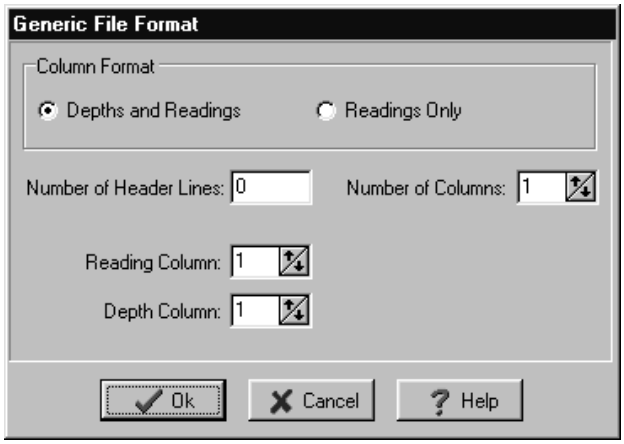


Depending upon the format of the geophysical file, you will then be prompted to select which curve (gamma ray, resistivity, SP, etc.) in the file to display. Some geophysical file formats support multiple curves in one file.

If the file format is LAS the Geophysical Log Type form shown below will be displayed. Select the curve to display from the list of available curves in that file.



If the file format is Generic ASCII the Generic File Format form below will be displayed.



The following information can be entered on this form:

Column Format: The file can have either the depths in readings in columns or only the readings in a column. If the column format is "Depths and Readings" the depths of the data points will be extracted from the depth column. If the column format is "Readings Only"the depths of the data points will be calculated using the specified start depth and increment.

Number of Header Lines: This is the number of header lines in the file to skip before reading the data from the columns.

Number of Columns: This is the number of data columns in the file.

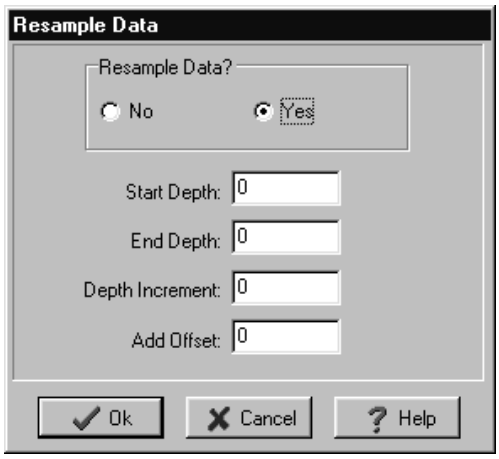
Reading Column: This is the number of the column (starting with column 1 at the left side of the file) that has the readings.

Depth Column: This is the number of the column that has the depths. If the Column Format is "Readings Only", this field will not be displayed.

Start Depth: This is the start depth to use for the readings. If the Column Format is "Depths & Readings", this field will not be displayed.

Depth Interval: This is the depth interval to use between readings. If the Column Format is "Depths & Readings", this field will not be displayed.

In order to save time and memory when displaying geophysical data, the data can be resampled at the time it is imported into the borehole log. After the log type is selected, the Resample Data form on the next page will be displayed



The following parameters can be entered on this form:

Start Depth: The depth to start importing data, all samples from depths before the Start Depth will be ignored. If Resample Data is set to No this field will not be displayed.

E**nd Depth**: The depth to stop importing data, all samples from depths after the End Depth will be ignored. If Resample Data is set to No this field will not be displayed.

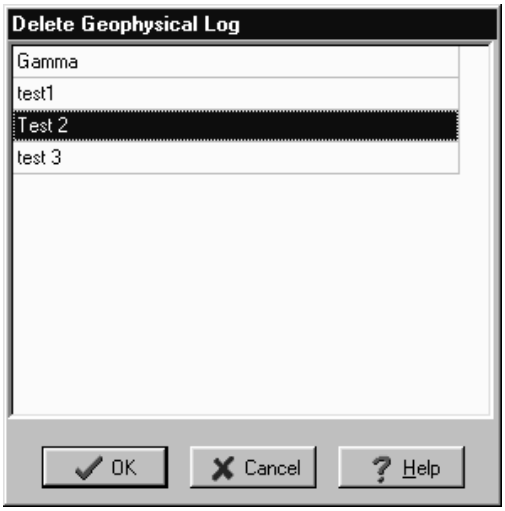
Depth Increment: The increment to use between depths when importing, any samples at depths between increments will be ignored. For example, if the Depth Increment is 1 and the file contains samples at depths 1.1, 1.6, and 2.1. The sample at depth 1.6 will be ignored. If Resample Data is set to No this field will not be displayed.

Add Offset: This is an offset depth to be added to the depths in the file. This is used to adjust for instrument height if necessary. If Resample Data is set to No this field will not be displayed.

After the above information has been entered, the geophysical file will be imported. When the file has been successfully imported, the number of samples read will be displayed.

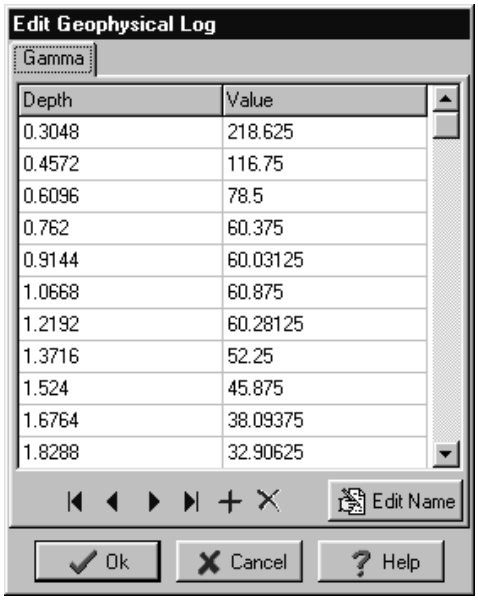
Deleting a Geophysical Log

To delete a geophysical log select the Delete Geophysical Log menu item of the Geophysical Data submenu of the Edit menu. The Delete Geophysical Log form below will be displayed. Select the geophysical log to be deleted and press the Ok button.



Editing a Geophysical Log

After the geophysical log has been imported, the data can be edited by either clicking on the geophysical column with the left mouse button or by selecting the geophysical log from the Geophysical Data submenu of the Edit menu. After one of the above tasks is completed, the Geophysical Data form on the next page will be displayed.



The following information can be entered and edited using this form:

Depth: This is the depth of the data point in the same units as set in the template.

Value: This is the value of the data point in the same units as set in the template.

The buttons at the bottom of this form are used for the following:

The **Start** button moves to the first data point.

The **Previous** button moves to the previous data point.

The **Next** button moves to the next data point.

The **End** button moves to the last data point.

The **Insert** button creates a new data point.

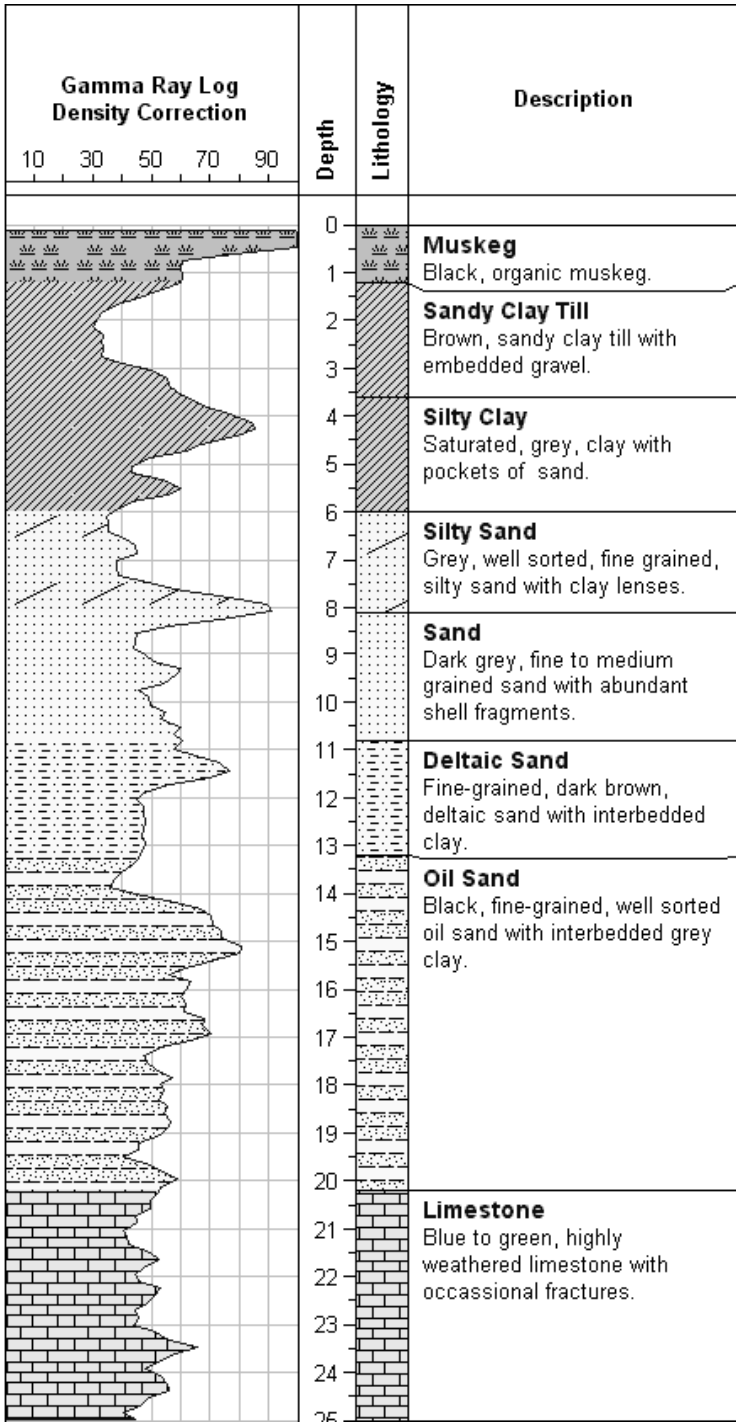
The **Delete** button deletes this data point.

Lithologic Cross Plots

Lithologic cross-plots are used to show the relationship between lithology and a depth dependent variable (for example, porosity, lead content, resistivity). A graph, a bar graph, or a geophysical log can represent the depth dependent variable. The cross-plot is generated by filling the region on the left side of the curve formed by the graph, bar graph, or geophysical log with the lithology symbols for each layer.

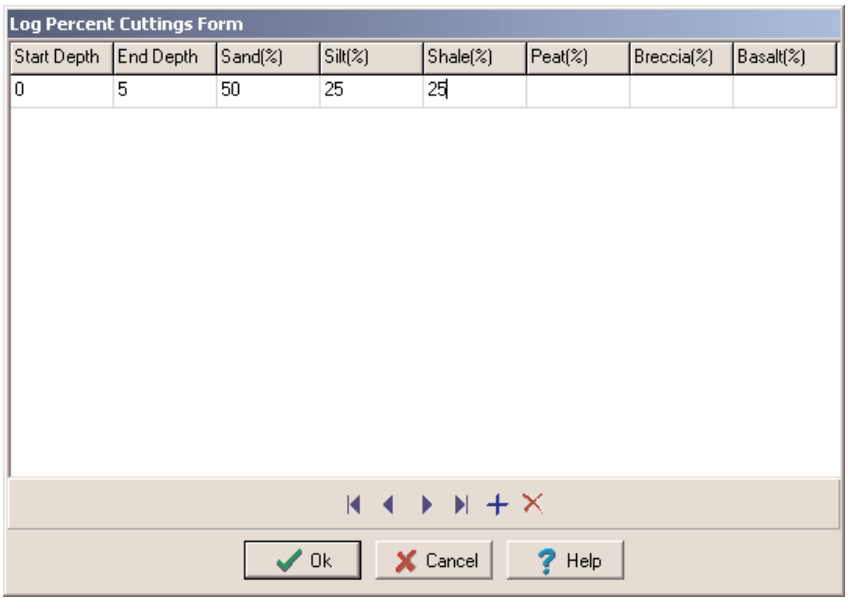
Other then setting the column type in the template to a lithologic cross-plot, the editing of data for cross-plots is identical to that of graphs, bar graphs, and geophysical logs. These types of editing are discussed above and are not repeated here.

An example of a lithologic cross-plot using a gamma ray geophysical log is provided on the next page.


Gamma Ray Log
Density Correction
10
30
50
70
90
Depth
Lithology
Description
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
Muskeg
Black, organic muskeg.
Sandy Clay Till
Brown, sandy clay till with embedded gravel.
Silty Clay
Saturated, grey, clay with pockets of sand.
Silty Sand
Grey, well sorted, fine grained, silty sand with clay lenses.
Sand
Dark grey, fine to medium grained sand with abundant shell fragments.
Deltaic Sand
Fine-grained, dark brown, deltaic sand with interbedded clay.
Oil Sand
Black, fine-grained, well sorted oil sand with interbedded grey clay.
Limestone
Blue to green, highly weathered limestone with occassional fractures.

Percent Cuttings Data

Percent cuttings data are collected normally during mud-logging and are used to denote the relative percentage of different lithologies at a depth. For example, the relative percentages of sand, shale, and silt may be entered at several depth intervals. The lithologies that can be entered for the percent cuttings are specified in the percent cuttings column of the template. The symbols for each of the lithologies will be scaled and drawn at each of the depth intervals.



To add or edit the percent cuttings data select the Percent Cuttings menu item from the Edit menu or click the left mouse button inside the Percent Cuttings column. The Log Percent Cuttings form below will be displayed.

On this form you can enter the Start and End Depths of the cuttings interval and the percentage of each lithology type that shows up in the borehole cuttings.

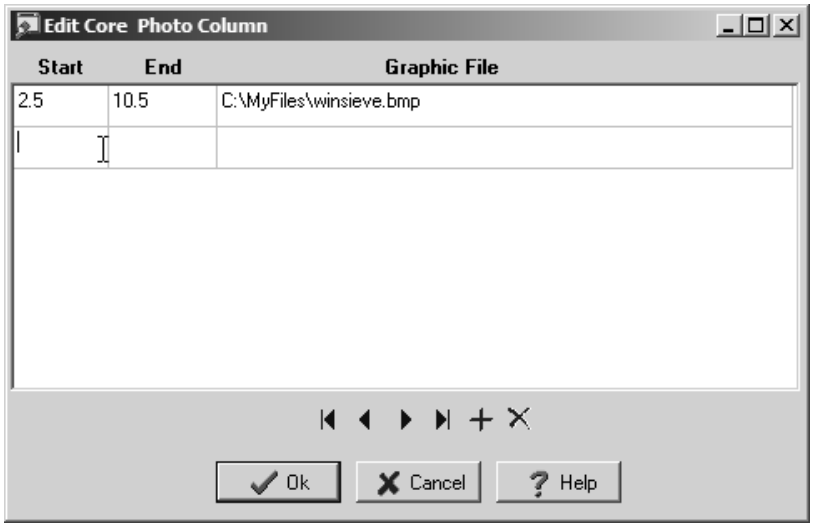
E.g 50% Sand
25% Silt
25% Shale

The total percentage of all lithologies must be less than or equal to 100%.

Core Photo Data

Core photo columns are used to display photos taken of cores at different depths or can be used to display photos taken inside the borehole itself. The photos can be in either BMP or JPEG format, and should be tied to a particular depth in the borehole.

To add or edit the core photo data select the Core Photos menu item from the Edit menu or click the left mouse button inside the Core Photos column. The Edit Core Photo Column form below will be displayed.



Using this form you can specify the start and end depths and file names of the core photos. When the Graphic File column is clicked on a button will be displayed. Press this button to select the file containing the core photo.

Paragraphs

Floating paragraph text boxes can be added anywhere on a borehole log. These text boxes are displayed over top of any information on the borehole log. There is no limit to the number of paragraph text boxes that can be displayed. These boxes can overlap boundaries between the header, footer, and columns. Paragraph text boxes are typically used to add comments or a legend that applies to the entire log.

Adding a Paragraph

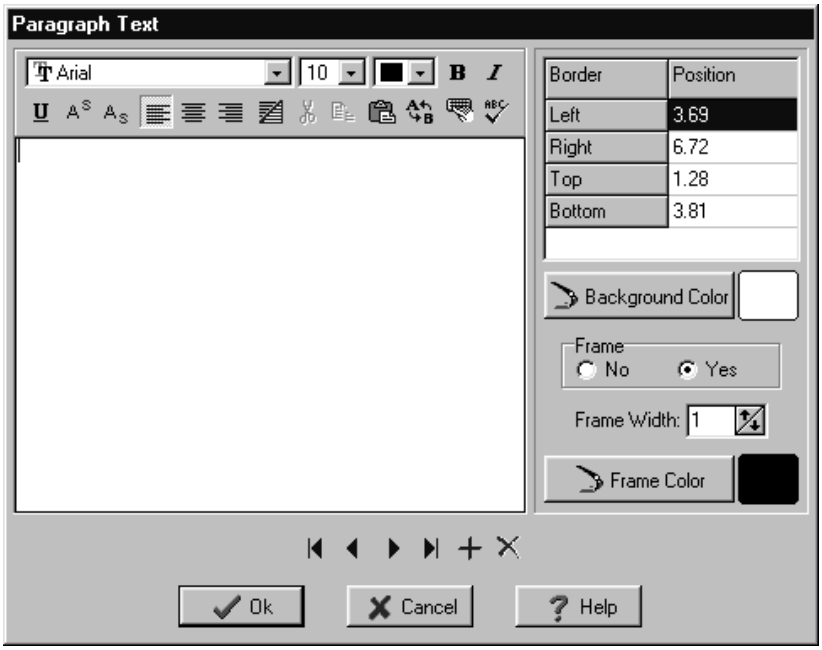
There are two methods that can be used to add a Paragraph Text box to a log:

1. By clicking on the Paragraph button on the Toolbar. Next using the left mouse button click on the location of the upper left corner of the paragraph text box. Then while holding the left mouse button down drag the mouse to the location of the lower right corner, and then release the mouse button. While the mouse button is held down a marquee box will be drawn to indicate the location of the paragraph box. After the button has been released, the Paragraph Text form shown in the section below will be displayed.

2. By selecting the Paragraph Text menu item from the Edit menu or Popup menu and then clicking on the Add button on the Paragraph Text form. This will create a new paragraph. Using this method, the location of the paragraph must be specified on the form as described below.

Editing a Paragraph

Existing Paragraph data can be edited by selecting the Paragraph Text menu item of the Edit menu or clicking the left mouse button inside the Paragraph Text of the log. After performing one of the above tasks, the Paragraph Text form below will be displayed.



The following information can be entered and edited using this form:

Text: This is the text for the paragraph. There is no limit to the length of the text. The Rich Text toolbar at the top of the form is used to format the text. This toolbar is described below.

Left: This is the position of the left border of the paragraph in inches or millimeters from the left side of the page.The units of measurement are specified in the page layout.

Right: This is the position of the right border of the paragraph in inches or millimeters from the left side of the page.

Top: This is the position of the top border of the paragraph in inches or millimeters from the top of the page. If the Paragraph button on the toolbar is used to create the paragraph, this position will be filled in by the program.

Bottom: This is the position of the bottom border of the paragraph in inches or millimeters from the top of the page. If the Paragraph button on the toolbar is used to create the paragraph, this position will be filled in by the program.

Background Color: This is the background color of the paragraph text box. When the Background Color button is pressed, a Color form is displayed. Using this form, a basic color can be selected or a custom color can be specified.

Frame: Select yes to display a frame around the paragraph text.

Frame Width: This is the line width of the frame around the paragraph text. If no frame is selected above, this field will not be displayed.

Frame Color: This is the color of the frame to display around the paragraph text. When the Frame Color button is pressed a Color form is displayed. Using this form, a basic color can be selected or a custom color can be specified. If no frame is selected above, this field will not be displayed.

At the top of the Paragraph Text form is the Rich Text toolbar, this toolbar can be used to modify the font characteristics of the text. Before selecting a speed button, the text to be modified should be selected with the mouse.

The speed buttons of the toolbar perform the following functions:

The **Font Typeface** box is used to select the name of the font to use for the selected text.

The **Font Size** box is used to set the size of the font for the selected text.

The **Font Color** box is used to select the color of the font for the selected text.

The **Bold** button is used to toggle the bold attribute of the selected text on and off.

The **Italics** button is used to toggle the italic attribute of the selected text on and off.

The **Underline** button is used to toggle the underline attribute of the selected text on and off.

The **Superscript** button is used to toggle the superscript attribute of the selected text on and off.

The **Subscript** button is used to toggle the subscript attribute of the selected text on and off.

The **Left Justify** button will left justify the selected text.

The **Center Justify** button will center justify the selected text.

The **Right Justify** button will right justify the selected text.

The **Select All** button will select all of the text in the memo field.

The **Cut** button will remove the selected text and place it in the clipboard.

The **Copy** button will copy the selected text to the clipboard.

The **Paste** button will paste the text in the clipboard, at the current position of the cursor in the text field.

The **Replace** button will replace the specified text in the text field.

The **Symbol** button will display a Symbol form. This form is used to place a symbol at the current cursor position in the text field. To select a symbol use the Font box to select the font containing the symbol and then select the desired symbol. After the desired symbol has been selected, press the Ok button to insert it into the text field. The WinLoG program comes with a font called "GAEA Symbols" that contains a variety of well and other symbols.

The **Spell Check** button will display a Spell Checker form and will check the spelling in the text field. The dictionary used to check the spelling is set in the program Preferences (see Chapter 3). When the Add button is pressed the word will be appended to the custom dictionary.

Sizing a Paragraph

The size of the paragraph can be changed using the Paragraph Text form above or the mouse. To adjust the size using the mouse, follow the procedure below.

1. Position the cursor at the boundary of the paragraph. The cursor should change to a set of arrows and the Status line should display

“Edit Size of Paragraph." The orientation of the arrows will indicate the direction that the boundary can be changed.

2. Press and hold the left mouse button down, and drag the boundary to its new position.

3. While dragging the boundary, a rectangle will be displayed showing its current location.

4. When the boundary is in the desired location, release the left mouse button.

Bitmaps

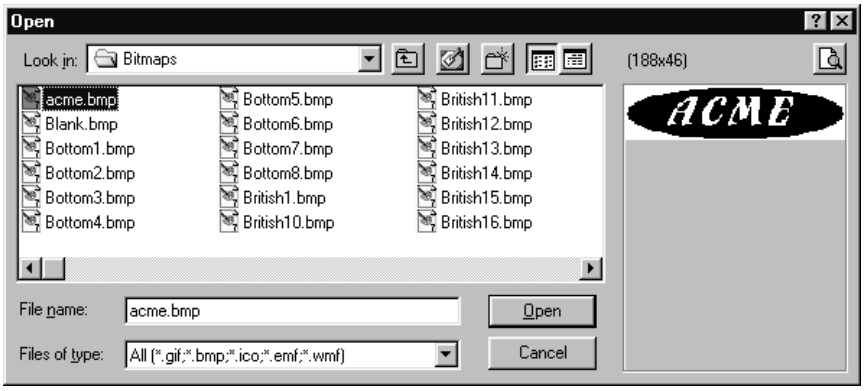
Bitmaps contained in Windows bitmap (BMP) files can be added anywhere on a log. These bitmaps can be used to show company logos, site plans, and other graphical information. Bitmaps are displayed over top of any information on the log. There is no limit to the number of bitmaps that can be displayed.

Adding a Bitmap

There are two methods that can be used to add a bitmap to a log:

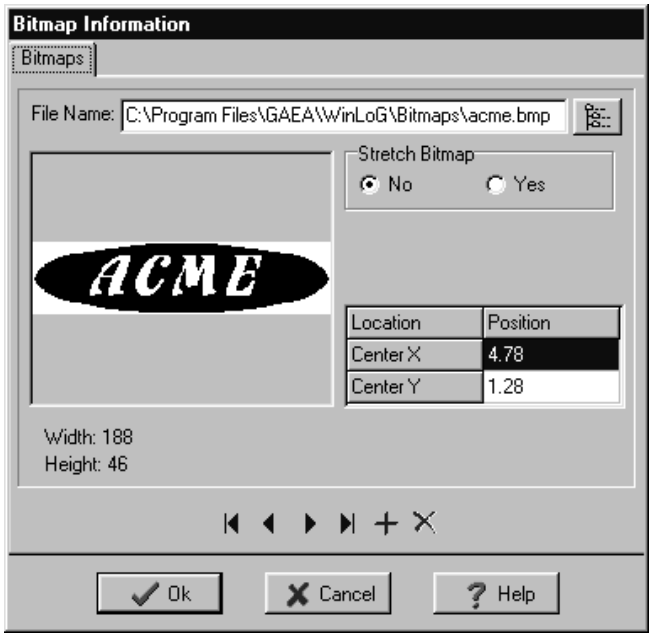
1. Click on the Bitmap button on the Toolbar. Next using the left mouse button click on the location of the center of the bitmap. The Open form on the next page will then be displayed. Select the bitmap file and then press the Open button.

2. Select the Bitmaps menu item from the Edit menu or Popup menu and then clicking on the Add button on the form. The Open form on the next page will then be displayed. Select the bitmap file and then press the Open button. Using this method, the location of the bitmap must be specified on the form as described below.



Editing a Bitmap

Existing Bitmaps can be edited by selecting the Bitmaps menu item of the Edit menu or clicking the left mouse button inside the Bitmap. After performing one of the above tasks, the Bitmap Information form on the next page will be displayed.



The following information can be entered and edited using this form:

File Name: This is the name of the bitmap file to display on the template. To change the name of the file, edit this name or click on the button to the right of the name. If the button to the right is pressed, an Open bitmap file form will be displayed. Select the desired file and then press the Open button.

Stretch Bitmap: Select yes to stretch the bitmap to fit within the specified borders. If no is selected, only the center of the bitmap and page can be entered for the position. If the Bitmap button on the toolbar is used to add the bitmap, Stretch Bitmap is set to No.

Maintain Aspect Ratio: Select yes to keep the aspect ratio of the bitmap the same as stored in the file. If yes is selected the bottom of the bitmap will be automatically adjusted to maintain the aspect ratio. If Stretch Bitmap is set to No, then this field will not be displayed and it is assumed that the aspect ratio is maintained.

Left: This is the position of the left border of the bitmap in inches or millimeters from the left side of the page. If the Bitmap button on the toolbar is used to create the bitmap, this field will not be displayed. If Stretch Bitmap is set to No then this field will not be displayed. The units of measurement are specified in the page layout.

Right: This is the position of the right border of the bitmap in inches or millimeters from the left side of the page. If the Bitmap button on the toolbar is used to create the bitmap, this field will not be displayed. If Stretch Bitmap is set to No then this field will not be displayed.

Top: This is the position of the top border of the bitmap in inches or millimeters from the top of the page. If the Bitmap button on the toolbar is used to create the bitmap, this field will not be displayed. If Stretch Bitmap is set to No, then this field will not be displayed.

Bottom: This is the position of the bottom border of the bitmap in inches or millimeters from the top of the page. If the Stretch Bitmap is set to No or Maintain Aspect Ratio is set to yes, then this field will not be displayed and the bottom will be calculated by the program.

Center X: This is the bitmap's horizontal center in inches or millimeters from the left side of the page. If Stretch Bitmap is set to Yes, this field will not be displayed. If the Bitmap button on the toolbar is used to add the bitmap, this field will be filled in by the program.

Center Y: This is the bitmap's vertical center in inches or millimeters from the left side of the page. If Stretch Bitmap is set to Yes, this field will not be displayed. If the Bitmap button on the toolbar is used to add the bitmap, this field will be filled in by the program.

Sizing a Bitmap

The size of the bitmap can be changed using the Bitmap Information form above or the mouse. To adjust the size using the mouse, follow the procedure below.

1. Position the cursor at the boundary of the bitmap. The cursor should change to a set of arrows and the Status line should display “Edit Size of Bitmap." The orientation of the arrows will indicate the direction that the boundary can be changed.

2. Press and hold the left mouse button down, and drag the boundary to its new position.

3. While dragging the boundary, a rectangle will be displayed showing its current location.

4. When the boundary is in the desired location, release the left mouse button.

Lines and Arrows

Horizontal, vertical, and diagonal lines and arrows can be added anywhere on a log. There is no limit to the number of lines and arrows that can be added.

Adding a Line or an Arrow

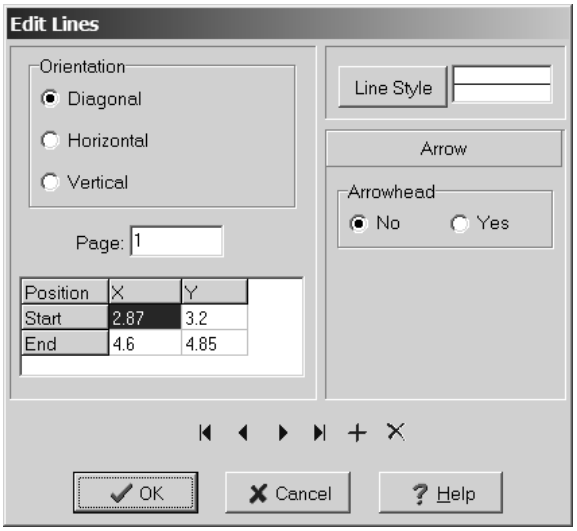
There are two methods that can be used to add a line or arrow to a log:

1. By clicking on the Line button on the Toolbar. Next using the left mouse button click on the location of the starting point of the line or arrow. Then while holding down the left mouse button, drag the cursor to the end of the line or arrow and release the mouse button. The Edit Lines form described in the next section will then be displayed.

2. By selecting the Lines menu item from the Edit menu or Popup menu and then clicking on the Add button on the form. The Edit Lines form described in the next section will then be displayed. Using this method, the location of the line must be specified on the form.

Editing a Line or Arrow

Existing Lines can be edited by selecting the Lines menu item of the Edit menu or clicking the left mouse button at the start or end point of the line. After performing one of the above tasks, the Edit Lines form on the next page will be displayed.



The following information can be entered and edited using this form:

Orientation: This is the orientation of the line, either diagonal, horizontal, or vertical. If the orientation is set to horizontal, the vertical position will be set to the y position of the start of the line. If the orientation is set to vertical, the horizontal position will be set to the x position of the start of the line.

Start X: This is the horizontal position of the start of the line in inches or millimeters from the left side of the page. If the Line button on the toolbar is used to create the line, the program will fill in this field. The units of measurement are specified in the page layout.

Start Y: This is the vertical position of the start of the line in inches or millimeters from the top of the page. If the Line button on the toolbar is used to create the line, the program will fill in this field.

End X: This is the horizontal position of the end of the line in inches or millimeters from the left side of the page. If the Line button on the toolbar is used to create the line, this field will be filled in by the program.

End Y: This is the vertical position of the end of the line in inches or millimeters from the top of the page. If the Line button on the toolbar is used to create the line, this field will be filled in by the program.

Line Style: This is the style of the line. The line style can be changed by pressing the Line Style button. A Line Properties form will then be displayed. Using this form the style, color, and width of the line can be set.

Arrowhead: To display an arrowhead at the start or end of the line select yes.

Arrow Position: This is position to place the arrowhead, either at the start or end of the line. If no arrowhead is selected above, this field will not appear.

Arrowhead Size: This is the size of the arrowhead. If no arrowhead is selected above, this field will not appear.

Rectangles

Rectangles can be added anywhere on a legend. There is no limit to the number of rectangles that can be added.

Adding a Rectangle

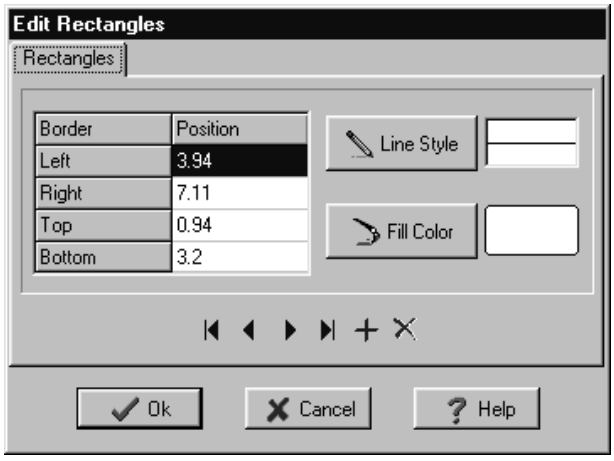
There are two methods that can be used to add a rectangle to a log:

1. By clicking on the Rectangle button on the Toolbar. Next using the left mouse button click on the location of the upper left corner of the rectangle. Then while holding down the left mouse button, drag the cursor to the lower right corner of the rectangle and release the mouse button. The Edit Rectangle form described in the next section will then be displayed.

2. By selecting the Rectangles menu item from the Edit menu or Popup menu and then clicking on the Add button on the form. The Edit Rectangles form described in the next section will then be displayed. Using this method, the location of the rectangle must be specified on the form.

Editing a Rectangle

Existing rectangles can be edited by selecting the Rectangles menu item of the Edit menu or clicking the left mouse button inside the rectangle on the template. After performing one of the above tasks, the Edit Rectangle form below will be displayed.



The following information can be entered and edited using this form:

Left: This is the position of the left border of the rectangle in inches or millimeters from the left side of the page. If the Rectangle button on the toolbar is used to create the rectangle, the program will fill in this position. The units of measurement are specified in the page layout.

Right: This is the position of the right border of the rectangle in inches or millimeters from the left side of the page. If the Rectangle button on the toolbar is used to create the rectangle, this position will be filled in by the program.

Top: This is the position of the top border of the rectangle in inches or millimeters from the top of the page. If the Rectangle button on the toolbar is used to create the rectangle, this position will be filled in by the program.

Bottom: This is the position of the bottom border of the rectangle in inches or millimeters from the top of the page. If the Rectangle button on the toolbar is used to create the rectangle, this position will be filled in by the program.

Line Style: This is the style of the rectangle border. The line style can be changed by pressing the Line Style button. A Line Properties form will then be displayed. Using this form the style, color, and width of the rectangle can be set.

Fill Color: This is the color to use to fill the inside of the rectangle. When the Fill Color button is pressed, a Color form will be displayed. Using this form, a basic color can be selected or a custom color can be specified.

Tables

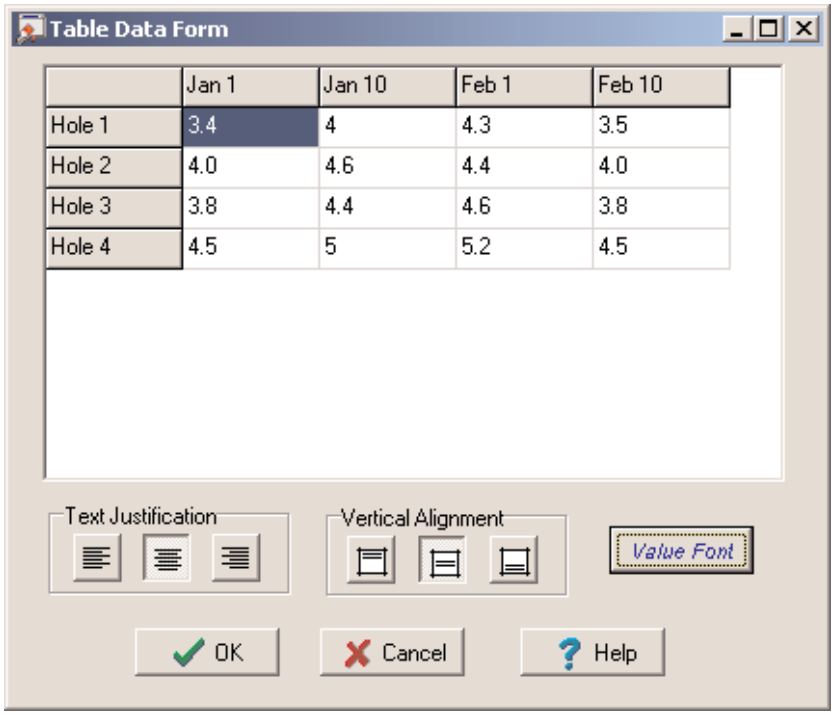
In version 4, there are two types of tables that can be shown on a log, log based tables and template based tables.

For template based tables all of the layout and formatting of the table is specified in the template, and only the data can be entered in the log. This type of table is useful when the location and format of the table should be the same for all logs.

Log based tables are added to a specific log and the layout and formatting are specified for that log. This type of table is useful if the data is only to be shown on the one log.

Template-Based Tables

Adding or editing data to a template based table from a log is quite simple, just click the left mouse button on the table. The table data will be displayed in the Table Data form shown below.



The data for the table can be edited in the rows and columns on the form. The text justification and font for the log data in the table can be set separately from the template using the buttons at the bottom of the form.

The **Left Justify** button will left justify the selected text.

The **Center Justify** button will center justify the selected text.

The **Right Justify** button will center justify the selected text.

The **Top Align** button will align table headers with the top of the table cells.

The **Center Align** button will align table headers in the center of the table cells.

The **Bottom Align** button will align table headers with the bottom of the table cells.

The **Value Font** button lets the user, set the font type of the text in the table.

The final result will be a table that will be very similar to the one below.

	Jan 1	Jan 10	Feb 1	Feb 10
Hole 1	3.4	4	4.3	3.5
Hole 2	4.0	4.6	4.4	4.0
Hole 3	3.8	4.4	4.6	3.8
Hole 4	4.5	5	5.2	4.5

Log-Based Tables

Floating tables can be added anywhere on a log. These tables are displayed over top of any information on the log. There is no limit to the number of tables that can be displayed. These boxes can overlap boundaries between the header, footer, and columns. Log tables are typically used to group of data with similar values such as a water level table.

Adding a Table

There are two methods that can be used to add a Table to a Log:

1. By clicking on the Table button on the Toolbar. Next using the left mouse button click on the location of the upper left corner of the Table box. Then while holding the left mouse button down drag the mouse to the location of the lower right corner. After the button has been released, the Table form on the next page will be displayed.

2. By selecting the Tables menu item from the Edit menu or Popup menu and then clicking on the Add button on the Tables form. This will create a new Table. Using this method, the location of the Table must be specified on the form as described below.

Editing a Table

Existing table data can be edited by selecting the Table menu item of the Edit menu or clicking the left mouse button inside the table of the log. After performing one of the above tasks, the Log Table form on the next page will be displayed.

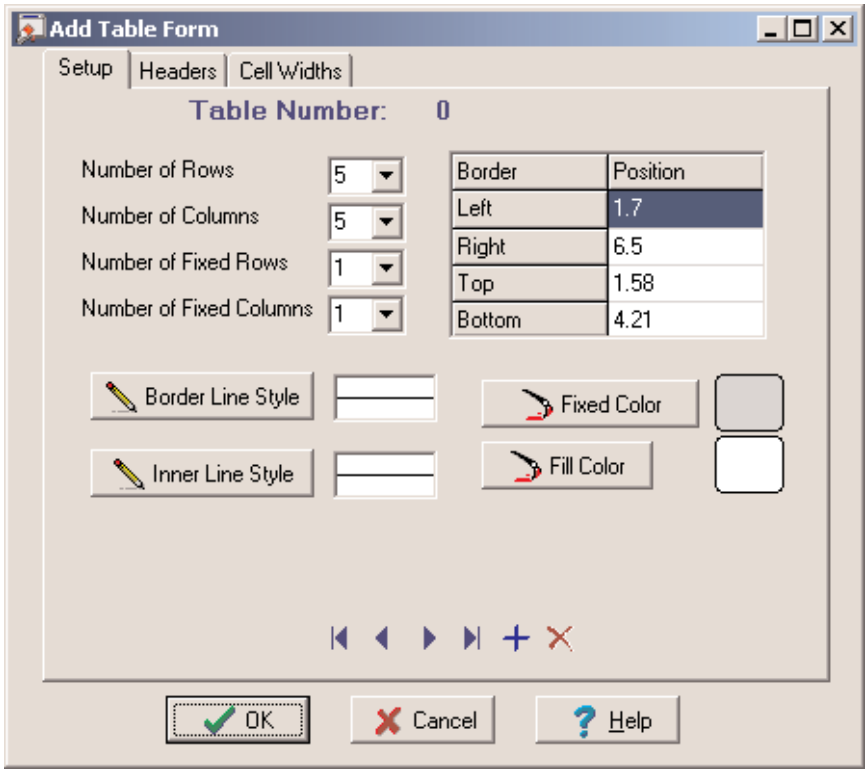
There are three tabs on the Add Tables form. These are:

1) Setup Tab

2) Headers Tab

3) Cell Widths Tab

Setup Tab



The following information can be entered and edited using this tab:

Number of Rows: The number of rows in the table.

Number of Columns: The number of columns in the table.

Number of Fixed Rows: The number of fixed rows in the table. Fixed rows contain information that can only be entered / edited from the template. Usually information such as titles for tables is entered from the template

Number of Fixed Cols: The number of fixed columns in the table. Fixed columns contain information that can only be edited / entered from the template. Usually information such as titles for tables is entered from the template.

Left: This is the position of the left border of the table in inches or millimeters from the left side of the page. The units of measurement are specified in the page layout.

Right: This is the position of the right border of the table in inches or millimeters from the left side of the page. The units of measurement are specified in the page layout.

Top: This is the position of the top border of the table in inches or millimeters from the top of the page. The units of measurement are specified in the page layout.

Bottom: This is the position of the bottom border of the table in inches or millimeters from the top of the page. The units of measurement are specified in the page layout.

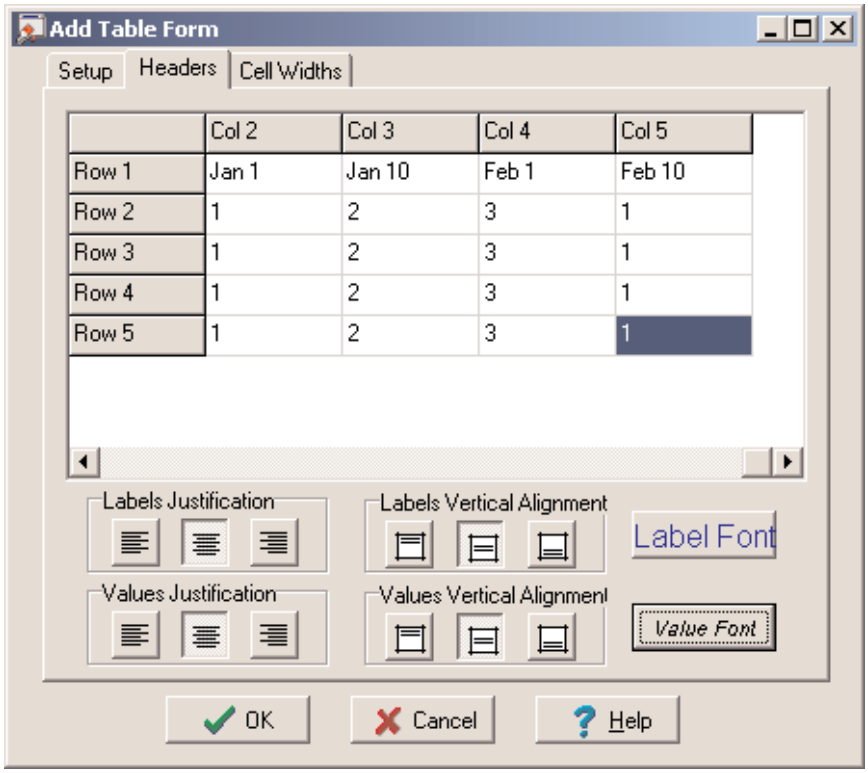
This is the line style of the outside border of the template table. It includes the lines thickness and style (Solid , Dash Dot, etc.)

This is the line style of the lines between the individual cells of a template table. It includes the lines thickness and style(Solid, Dash Dot, etc.)

This is the background colour of the fixed columns of the table.When the button is pressed a Color form will be displayed.

This is the background colour of the non-fixed columns of the table.When the button is pressed a Color form will be displayed.

Headers Tab



The following information can be entered and edited using this tab:

Table Headers: Headers can be entered for each fixed column in table. In this example, there is one fixed column and one fixed row, thus we can enter the headers for the 5 columns and 5 rows as shown to the Right.

The **Left** Justify button will left justify the text.

The **Center** Justify button will center justify the text.

The **Right** Justify button will right justify the text.

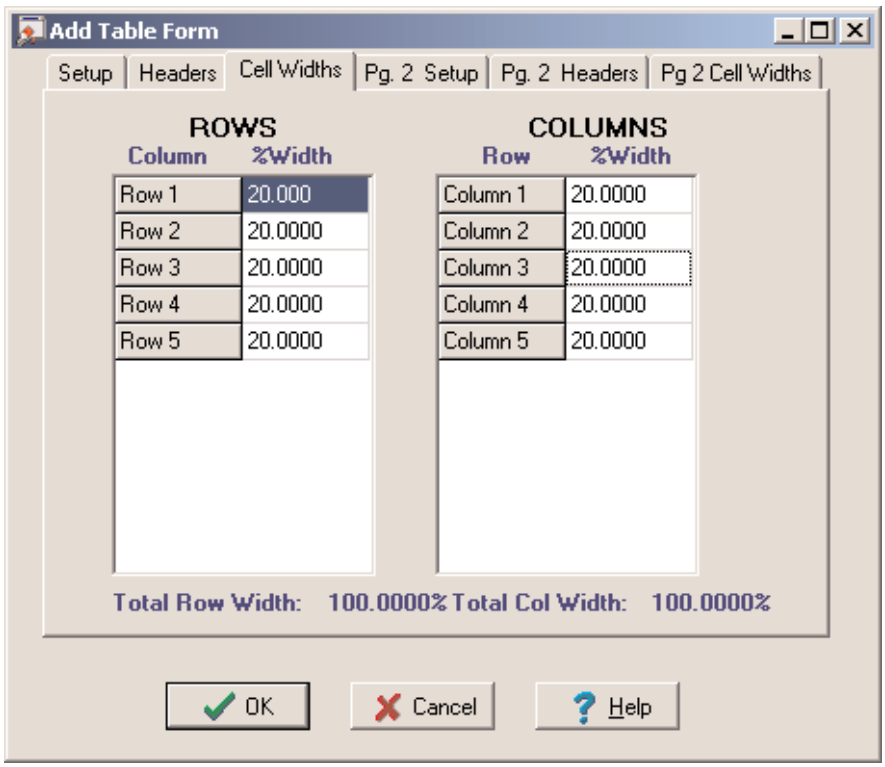
The **Top** align button will align the text with the top of the table cells.

The **Center** align button will align the text in the center of the table cells.

The **Bottom** align button will the text with the bottom of the table cells.

The **Label Font** button lets the user set the font type of the column and row headers.

The **Value Font** button lets the user set the font type of the column and row values.



Cell Widths Tab

The following information can be entered and edited using this tab:

Column Widths: Column width is the width of a individual column as a percentage of the total table width. The value should add up to 100%

Row Widths: Row width is the width of a individual row as a percentage of the total table height. The value should add up to 100%.

The final table looks like the figure below.

	Jan 1	Jan 10	Feb 1	Feb 10
Hole 1	1	2	3	1
Hole 2	1	2	3	1
Hole 3	1	2	3	1
Hole 4	1	2	3	1

Sizing a Table

The size of the table can be changed using the Edit Table form above or by using the mouse. To adjust the size using the mouse, follow the procedure below.

1. Position the cursor at the boundary of the Table. The cursor should change to a set of arrows and the Status line should display “Edit Size of Table" The orientation of the arrows will indicate the direction that the boundary can be changed.

2. Press and hold the left mouse button down, and drag the boundary to its new position.

3. While dragging the boundary, a rectangle will be displayed showing its current location.

4. When the boundary is in the desired location, release the left mouse button.

Moving a Table

The position of the table can be changed using the Edit Table form above or by using the mouse. To adjust the size using the mouse, follow the procedure below.

1. Position the cursor at the center of the Table. The cursor should change to an arrow with a box and the Status line should display “Move Table".

2. Press and hold the left mouse button down, and drag the boundary to its new position.

3. While dragging the boundary, a rectangle will be displayed showing its current location.

4. When the boundary is in the desired location, release the left mouse button.

Deviation Survey Data

A new feature added to Winlog Version 4 is the ability to represent deviated boreholes.

What is a deviated borehole?

Boreholes are designed to obtain information in the third dimension, ie. at depth, below the two-dimensions of the earth's surface. Today it is relatively easy to determine position on the surface, but not so at depth. Unfortunately, all too often, the path of the hole is erroneously assumed to follow the original dip (or inclination) and azimuth (or direction) established at the collar, at the top of the hole. Numerous borehole surveying devices have been developed, none of which are perfect, however quite accurate results are possible by using the right tool in the right hole.

How is a borehole deviation survey accomplished?

A borehole deviation survey is usually accomplished by moving a probe along the hole and sensing the movement of the probe relative to one or more frames of reference which may include the earth's gravitational field, magnetic field or other inertial reference, and/or by sensing the distortion or bending of the housing of the probe itself. The different methods each have their own advantages and limitations such as ability / inability to operate inside steel casing, speed and complexity of operation, accuracy, cost, distance between measurements, ruggedness and reliability.

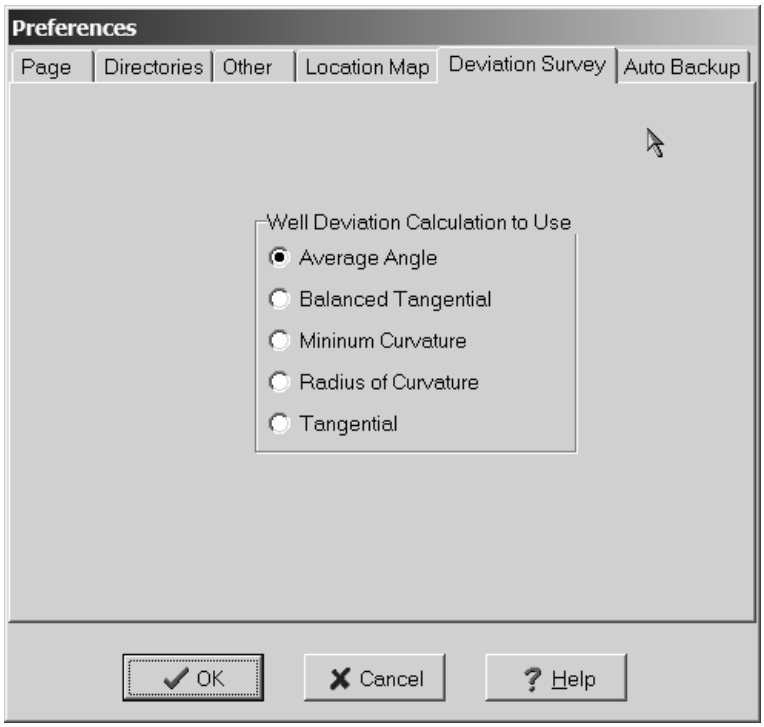
Setting The Deviation Calculation

Winlog provides five different calculations from which to calculate borehole X,Y, and Z coordinates based on a deviation survey which includes the measured depth, inclination angle, and the azimuth angle. These include:

1) Average Angle method
2) Balanced Tangential method

3) Minimum Curvature method
4) Radius Of Curvature method
5) Tangential method

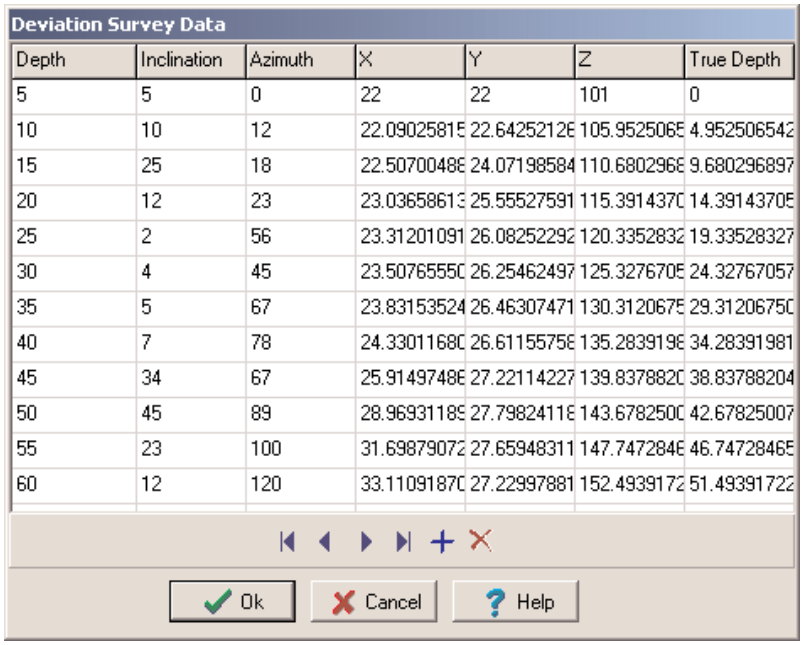
The user can select which method Winlog uses to correct borehole depths on the Deviation Survey tab of the Preferences form. To display the Preferences form shown below, select the Preferences menu item from the File menu



Editing Borehole Deviation Survey Data

Winlog allows the user to edit a Borehole Deviation Survey in the event that there are some spurious points in the data. To edit the deviation data select the Deviation Survey menu item from the Edit menu. This will open the Deviation Survey Data form on the next page.

The Deviation Survey Data form allows the user to Add, Edit, or Delete the deviation survey data. After the data has been edited, click Ok to save the changes.



Deviation Survey Data

Depth	Inclination	Azimuth	X	Y	Z	True Depth
5	5	0	22	22	101	0
10	10	12	22.09025815	22.64252126	105.9525065	4.952506542
15	25	18	22.50700488	24.07198584	110.6802968	9.680296897
20	12	23	23.03658613	25.55527591	115.3914370	14.39143705
25	2	56	23.31201091	26.08252292	120.3352832	19.33528327
30	4	45	23.50765550	26.25462497	125.3276705	24.32767057
35	5	67	23.83153524	26.46307471	130.3120675	29.31206750
40	7	78	24.33011680	26.61155758	135.2839196	34.28391981
45	34	67	25.91497486	27.22114227	139.8378820	38.83788204
50	45	89	28.96931189	27.79824118	143.6782500	42.67825007
55	23	100	31.69879072	27.65948311	147.7472846	46.74728465
60	12	120	33.11091870	27.22997881	152.4939172	51.49391722

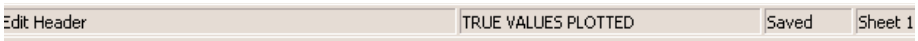
Ok Cancel Help

Switching Between Measured Values and True Values

Winlog allows the user to easily switch between measured depth values and the calculated depth values by clicking the button on the log toolbar. The type of data being plotted at anytime is shown by the Status Bar at the bottom of the log.

It should say MEASURED VALUES PLOTTED when plotting the measured values

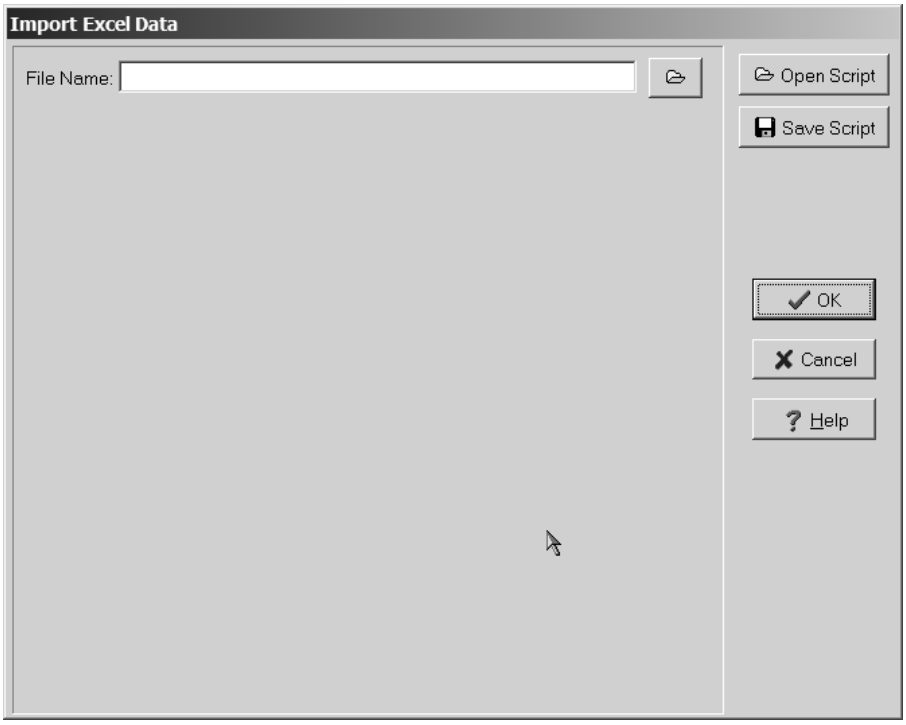
and TRUE VALUES PLOTTED for the true depth data.



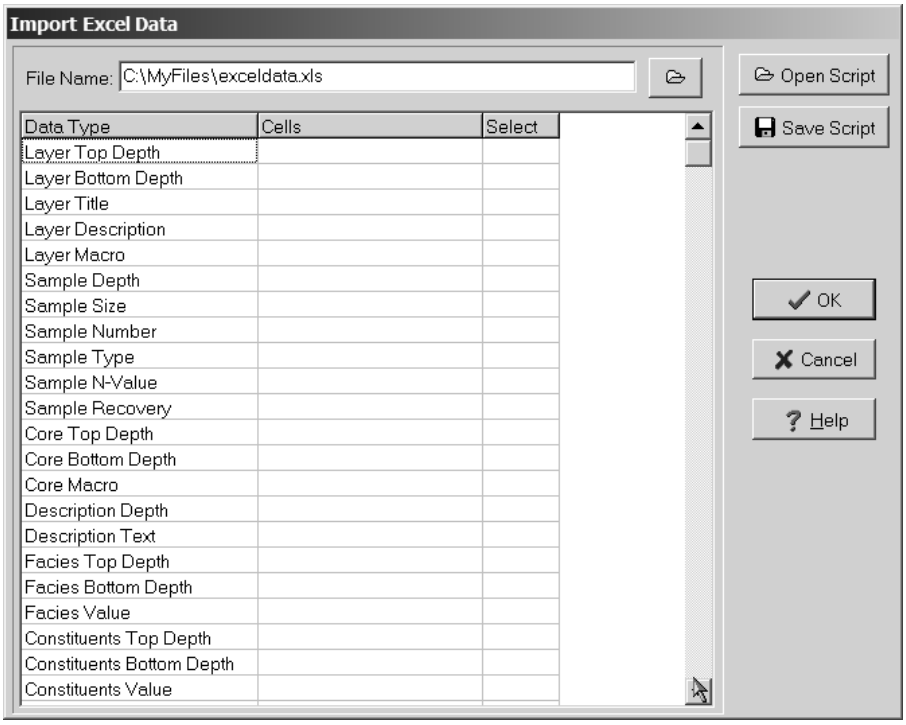
Importing Excel Log Data

Several types of data for a borehole log can be imported from an Excel spreadsheet. The types of data that can be imported will depend on the template for the log. Most of the data in the template columns can be imported.

To import the data select the Import Excel Log Data menu item from the Edit menu. The Import Excel Data form below will be displayed.



The Excel spreadsheet to be imported should be specified as the File Name on the form. It can be selected using the button to the right. After the Excel file has been specified the form will be updated, as shown on the next page, with the available data that can be imported using the template.

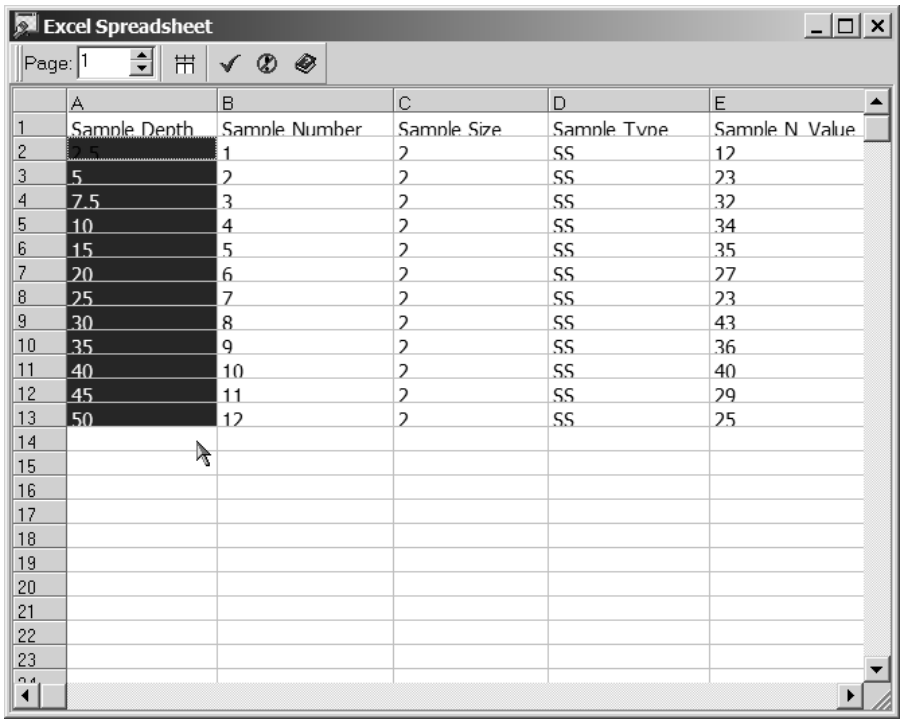


The Data Type column on the form shows the types of data from the template that can be imported. One or more of these data types can be imported by specifying the cell range in the Cells column.

The cell range can be specified by typing it in or by clicking on the Select column. A Select button will be displayed in the column, click on this button to display the spreadsheet in the Excel Spreadsheet form shown on the next page.

To select the cell range, click on the first cell and then hold the left mouse button down while selecting the cells. When the cell range has been selected, click the right mouse button to return to the Import Excel Data form. The selected cell range will be filled in on the form.

This operation can be repeated until all of the cell ranges for the data types on the form have been specified. When all of the cell ranges that are to be imported are entered, click on the Ok button to import the data into the log.



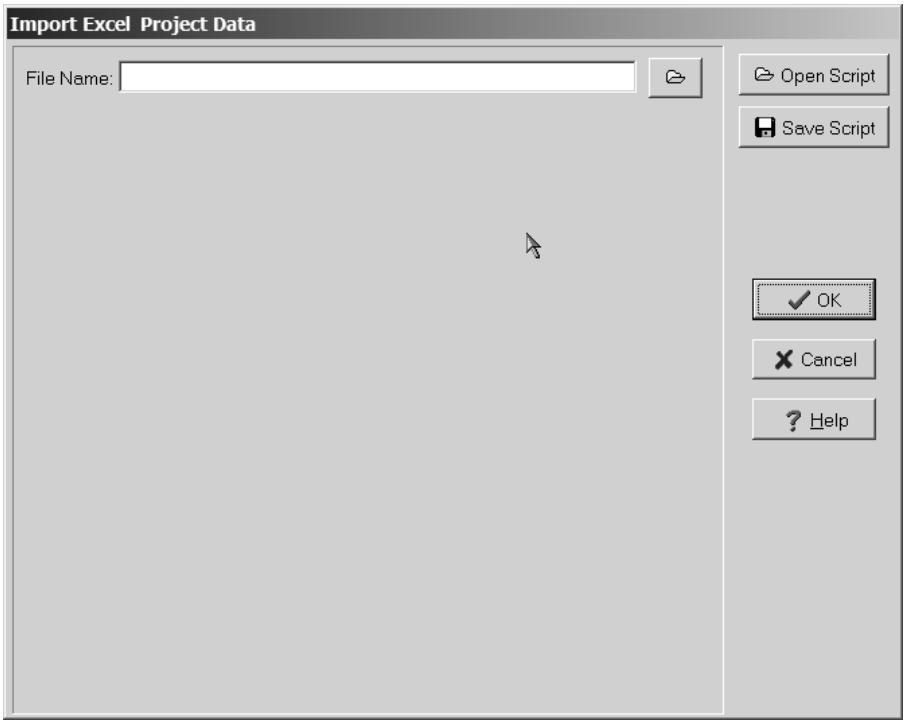
	A	B	C	D	E
1	Sample Depth	Sample Number	Sample Size	Sample Type	Sample N Value
2	2.5	1	2	SS	12
3	5	2	2	SS	23
4	7.5	3	2	SS	32
5	10	4	2	SS	34
6	15	5	2	SS	35
7	20	6	2	SS	27
8	25	7	2	SS	23
9	30	8	2	SS	43
10	35	9	2	SS	36
11	40	10	2	SS	40
12	45	11	2	SS	29
13	50	12	2	SS	25
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					

To make it easier to import data from spreadsheets, script files can be used. These files contain the cell ranges for a spreadsheet. Once the cell ranges have been specified they can be saved in a script file. This script file can then be opened and used for the next borehole. Even if the Excel file is different, it can still be used with the script file as long as the data in the spreadsheet is arranged the same way.

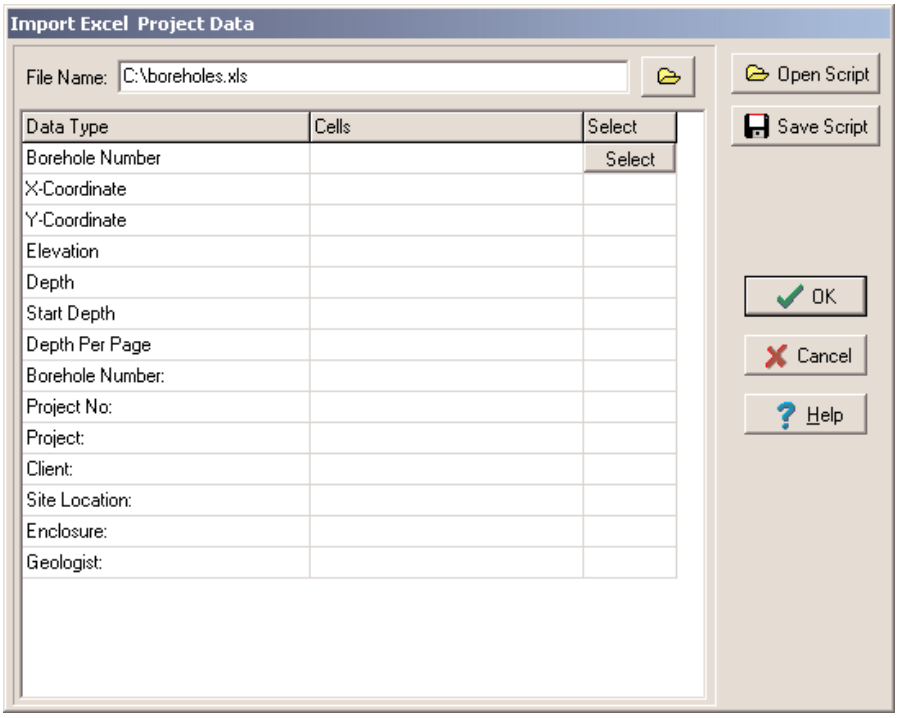
Importing Excel Project Data

New in WinLoG Version 4 is the ability to import project data for multiple boreholes from an Excel spreadsheet. This feature can be used to import bulk data for one or more boreholes in a project. If the boreholes do not exist in the project they will be created. One use for this feature would be to import all of the survey data for the boreholes in a project at the same time from a single Excel spreadsheet.

To import Excel project data select the Import Excel Project Data menu item from the Edit menu.The Import Excel project Data form below will be displayed.



The Excel spreadsheet to be imported should be specified as the File Name on the form. It can be selected using the button to the right. After the Excel file has been specified the form will be updated, as shown on the next page, with the available General Borehole data that can be imported using the borehole that is opened.

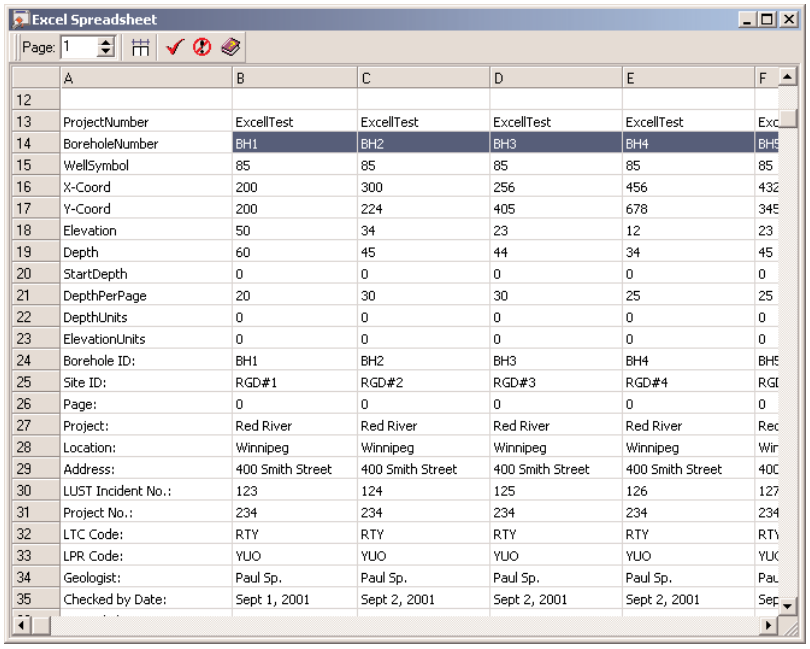


One or more of these fields can be imported from the spreadsheet and stored in the boreholes for the project.

To specify the cell range in the spreadsheet to use for the borehole general data type, double click on each Select column. A Select button will be displayed for that data type, click on the button to display the spreadsheet and select the cell range.

Alternatively, if a previously saved Script file is available it can be opened using the Open Script button. This script will contain the cell ranges to import from the Excel spreadsheet. This feature is useful when you have several Excel spreadsheets with the same format that are for different projects.

For example, double click on the Borehole Number's select column. This will display the spreadsheet in the Excel Spreadsheet form shown on the next page.



	A	B	C	D	E	F
12						
13	ProjectNumber	ExcellTest	ExcellTest	ExcellTest	ExcellTest	Exc
14	BoreholeNumber	BH1	BH2	BH3	BH4	BH5
15	WellSymbol	85	85	85	85	85
16	X-Coord	200	300	256	456	432
17	Y-Coord	200	224	405	678	345
18	Elevation	50	34	23	12	23
19	Depth	60	45	44	34	45
20	StartDepth	0	0	0	0	0
21	DepthPerPage	20	30	30	25	25
22	DepthUnits	0	0	0	0	0
23	ElevationUnits	0	0	0	0	0
24	Borehole ID:	BH1	BH2	BH3	BH4	BH5
25	Site ID:	RGD#1	RGD#2	RGD#3	RGD#4	RGI
26	Page:	0	0	0	0	0
27	Project:	Red River	Red River	Red River	Red River	Rec
28	Location:	Winnipeg	Winnipeg	Winnipeg	Winnipeg	Wir
29	Address:	400 Smith Street	400 Smith Street	400 Smith Street	400 Smith Street	400
30	LUST Incident No.:	123	124	125	126	127
31	Project No.:	234	234	234	234	234
32	LTC Code:	RTY	RTY	RTY	RTY	RTY
33	LPR Code:	YUO	YUO	YUO	YUO	YUO
34	Geologist:	Paul Sp.	Paul Sp.	Paul Sp.	Paul Sp.	Pau
35	Checked by Date:	Sept 1, 2001	Sept 2, 2001	Sept 2, 2001	Sept 2, 2001	Sep

To select the cell range, click on the first cell and then hold the left mouse button down while selecting the cells. When the cell range has been selected, click the right mouse button to return to the Import Excel Project Data form. The selected cell range will be filled in on the form.

After all of the cell ranges have been specified, the Save Script button will save a script file that maybe used at a later point to import Excel project data that is in the exact same format.

Click on the OK Button to add the data to the project database. If no cell range is specified then data for that Data Type will not be imported.

Importing Deviation Survey Data

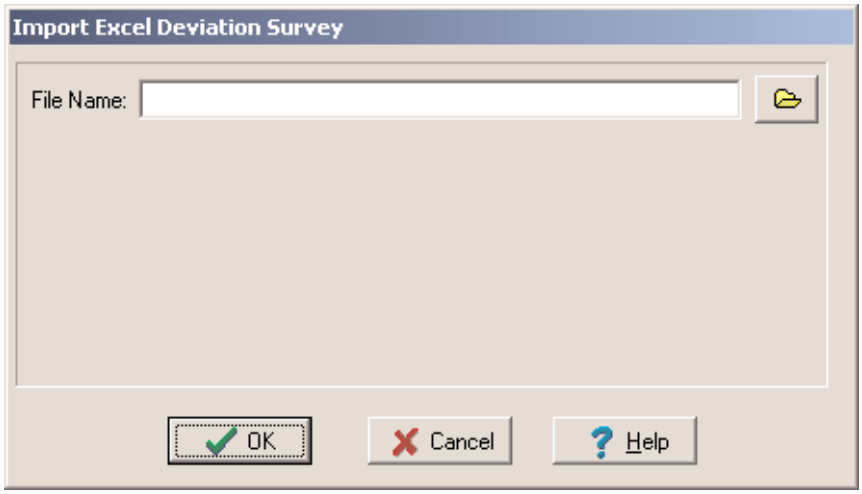
Winlog gives the user three choices when it comes to importing deviation surveys:

1) Import from an Excel spread sheet.
2) Import from an LAS file.
3) Import from an ASCII file.

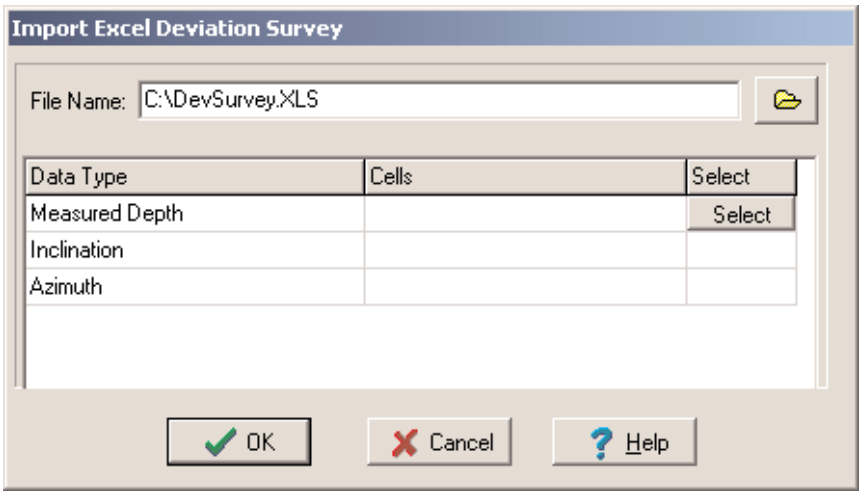
To import a deviation survey select the Import Deviation Survey submenu from the Edit menu. Then select the file type to import, either a)Excel, b) LAS, or c) ASCII.

Importing a Excel Deviation Survey

To import an Excel Deviation survey select the Excel File menu item from the Import Deviation Survey submenu. This will open up the Import Excel Deviation Survey form below.



Then select the name of the Excel File you wish to import the deviation survey from. After the Ok button has been pressed the Import Excel Deviation Survey Form will contain three rows and three columns, as shown on the next page.



The Row Headers are:

Measured Depth: The measured depth at which a deviation survey reading was taken.

Inclination: This is the dip of the borehole from true vertical.

Azimuth: The azimuth (az) angle is the compass bearing, relative to true (geographic) north, of a point on the horizon directly beneath an observed object. The horizon is defined as a huge, imaginary circle centered on the observer, equidistant from the zenith (point straight overhead).

The Column Headers are:

Data Type: The data type to be stored in a cell.

Cells: The cells chosen from the spread sheet for a data type. In general you should choose the same number of cells for the measured Depth, as you do for the Inclination and azimuth.

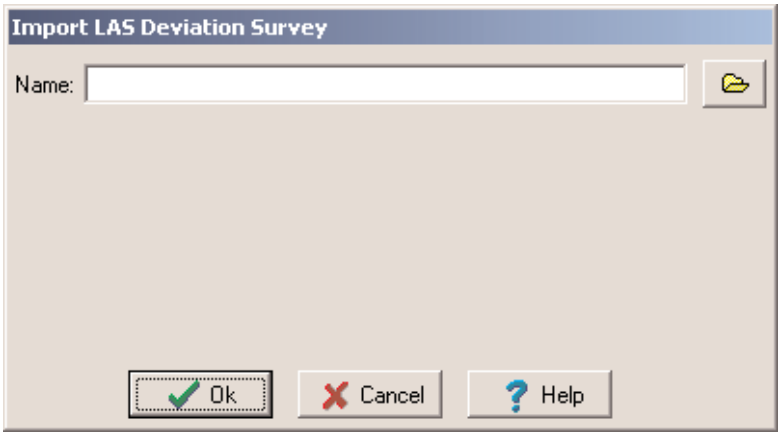
Select: Clicking the select column once shows the **Select** button for that row. Double clicking it opens up the This column opens up a Excel Spread sheet from which you can select the deviated survey data.

To add Measured Depth data, click on the Select column and then click on the Select button. This will display the Excel spreadsheet on the Excel Spreadsheet form. Select the cells you wish to use for the Measured depth data then click the right mouse button. This operation can then be repeated for the Inclination and Azimuth.

After the cell ranges have been specified, click the OK button to import the data.

Importing a LAS File Deviation Survey

To import a deviation survey from an LAS file select the LAS File menu item from the Import Deviation Survey submenu. This will open up the Import LAS Deviation Survey form below.

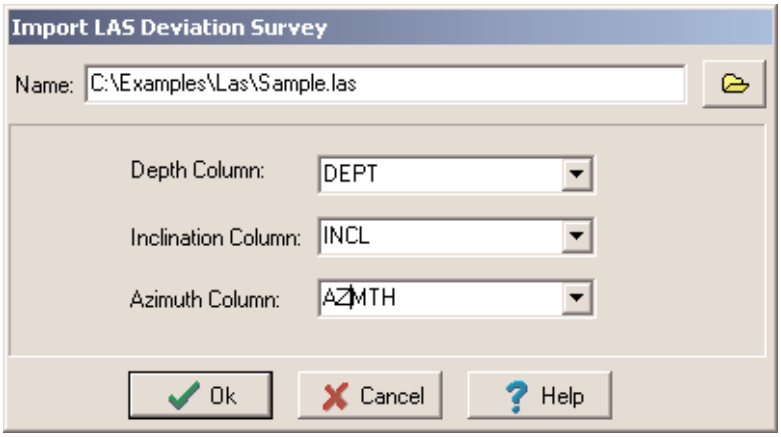


Select the LAS file to import using the Open button to the right of the Name. After the file has been specified the form will contain fields for specifying the depth, inclination, and azimuth columns, as shown on the next page. This form will allow you to specify the following:

Depth Column: This is the measured depth column data in the LAS File. The user defines this column by selecting the appropriate Depth column from the list of all columns in the LAS file using the the combo box to the right.

Inclination Column: This is the Inclination column the LAS File. The user defines this column by selecting the appropriate Inclination column from the list of all columns in the LAS file using the the combo box to the right.

Azimuth Column: This is the Azimuth column the LAS File. The user defines this column by selecting the appropriate Azimuth column from the list of all columns in the LAS file using the the combo box to the right.

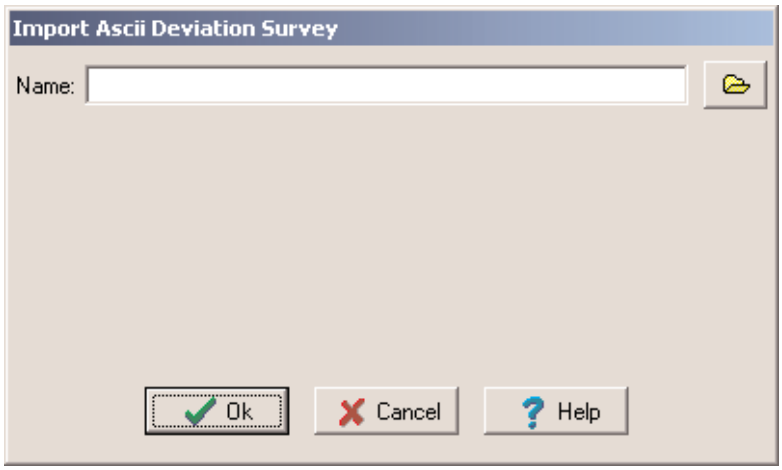


After all of the above information has been specified, press Ok to process the file.

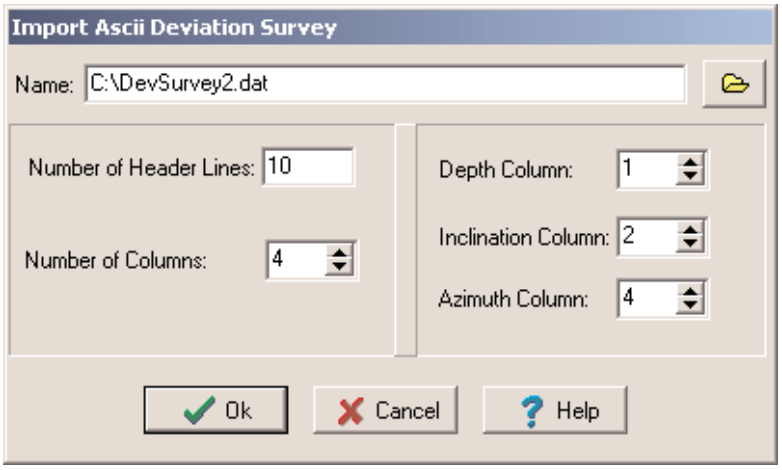
Importing an ASCII File Deviation Survey

To import a deviation survey from an ASCII file select the Ascii File menu item from the Import Deviation Survey submenu. This will open up the Import Ascii Deviation Survey form, shown on the next page.

Select the Ascii file to import using the Open button to the right of the Name.



After the file has been specified the form will be updated as shown below.



The following information can be entered:

Number of Header Lines: This is the number of lines of header information in the ascii data file that winlog should ignore.

Number of Columns: This is the number of columns of data that exist in the ascii data file.

Depth Column: This is the column of data to use for the measured depth data.

Inclination Column: This is the column of data from the ascii data file to use for the inclination data.

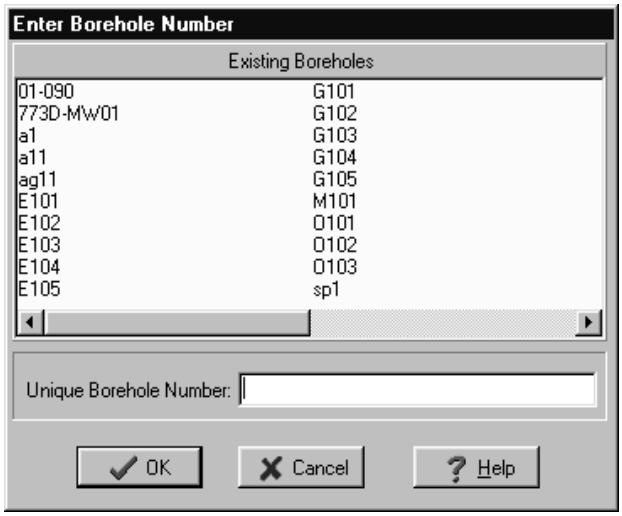
Azimuth Column: This is the column of data from the ascii data file to use for the azimuth data.

After all of the above information has been specified, press Ok to process the file.

Saving a Borehole Log

To save a borehole log after it has been edited, either select the Save Borehole Log menu item of the Borehole Logs submenu of the File menu or press the Save button on the borehole log toolbar.

To save the borehole log under a different borehole number, press the SaveAs button on the borehole log toolbar. The Enter Borehole Number form shown below will be displayed. Enter a unique borehole number and then press the Ok button.



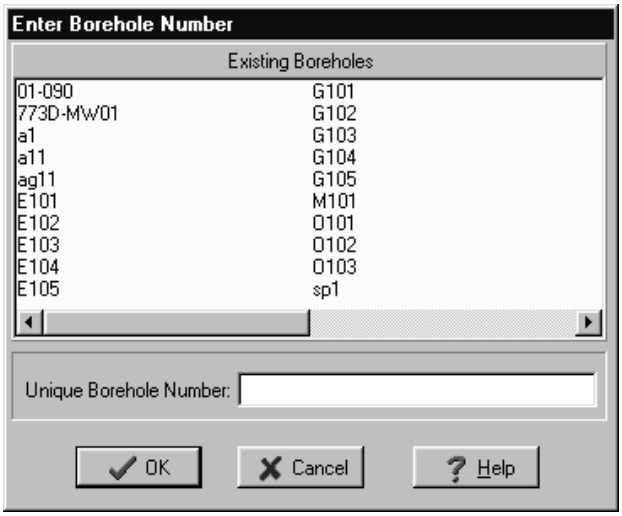
Printing a Borehole Log

To print a borehole log either click the right mouse button and select the Print menu item from the popup menu or press the Print button on the borehole log toolbar.

Alternatively, several or all of the borehole logs in the project can be printed using the Print button on the Project toolbar or the Print menu item in the File menu. This approach is discussed in Chapter 3.

Copying a Borehole Log

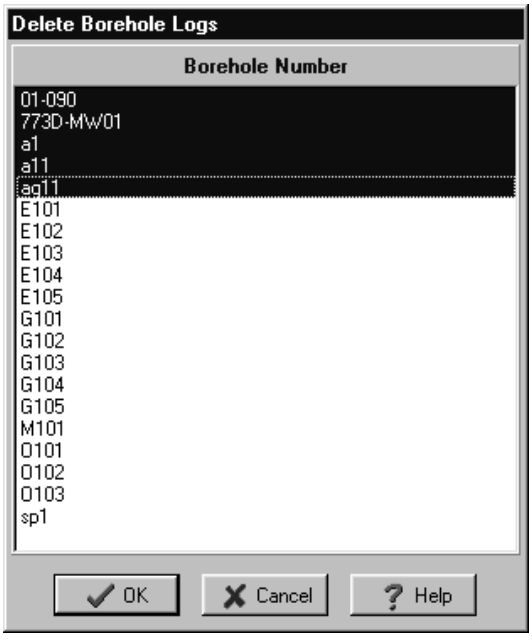
Once entered, a borehole log can be easily copied. The copy will be placed in a new window, which can be edited and saved with a different file name. This function can be used to quickly copy and then edit borehole logs that are very similar; such as a set of boreholes drilled on the same site.



To copy a borehole log press the Copy button on the toolbar. The Enter Borehole Number form shown on the previous page be will be displayed. This form lists the current boreholes in the project. Enter a unique Borehole Number for the new log and then press the Ok button.

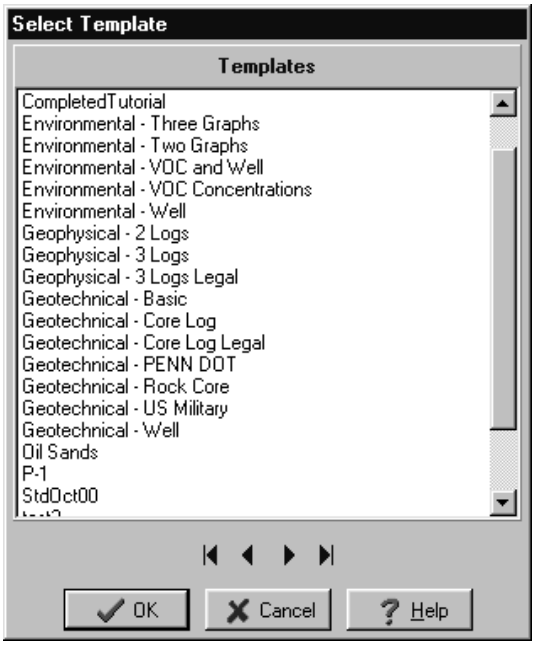
Deleting a Borehole Log

To delete a borehole log select the Delete Borehole Log menu item from the Borehole Logs submenu of the File Menu. The Delete Borehole Logs form below will be displayed. A single borehole log can be selected by clicking on it and pressing the Open button. A range of borehole logs can be selected by clicking on the beginning of the range, and then holding down the Shift key while clicking on the end of the range. Multiple logs can be selected, by holding down the CTRL key while clicking on the logs.

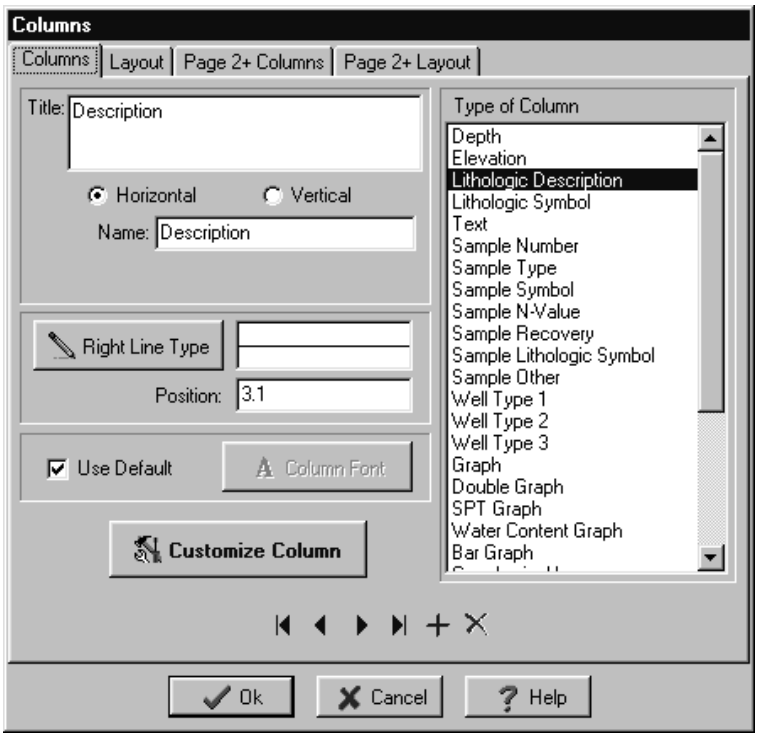


Changing the Log Template

A different template can be selected for the borehole log using the Change Template button on the toolbar or menu command. The form below will then be displayed. This form lists the current templates available. Select the desired template and then press the Ok button. Changing the template for the log will only change the format, and will not affect any of the log data.



5. Templates


Columns
Columns
Layout
Page 2+ Columns
Page 2+ Layout
Title:
Description
Horizontal
Vertical
Name:
Description
Right Line Type
Position:
3.1
Use Default
Column Font
Customize Column
Type of Column
Depth
Elevation
Lithologic Description
Lithologic Symbol
Text
Sample Number
Sample Type
Sample Symbol
Sample N-Value
Sample Recovery
Sample Lithologic Symbol
Sample Other
Well Type 1
Well Type 2
Well Type 3
Graph
Double Graph
SPT Graph
Water Content Graph
Bar Graph
Ok
Cancel
Help

5. Templates

Templates are used to control the layout and formatting of borehole logs. In general, all of the boreholes in a project would use one or two templates to format the logs. In this way, a consistent format can be established within a project and across projects. Once a template is created it is available to all projects.

WinLoG comes with numerous easily customized templates, which can be edited and saved as new templates. You can also create a new template by specifying the desired layout. Each template consists of a header, footer, several columns, bitmaps, lines, rectangles, and paragraph text. Templates can be customized to display different header and footer titles, number, and type of columns, fonts, colors, etc.

Templates can have a first and second page, where the second page layout is different than the first page layout. The second page will be used to format the second and subsequent pages of a log.

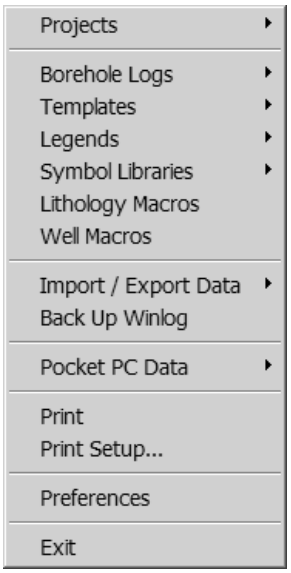
Templates are stored in the WinLoG master database. The format of the master database is Microsoft Access. This database is stored in the Main Database Directory. For a detailed discussion of the database structure, see Database Structure in the Introduction Chapter or Appendix B.

This chapter describes how to:

1. Create a new template.
2. Enter and edit the following information:
   - Header and Footer Titles
   - Columns
   - Paragraph text
   - Bitmaps
   - Lines and arrows
   - Rectangles
   - Tables
   - Page Setup
3. Save a template.
4. Delete a template
5. Create a second template page.
6. Set a password for the template

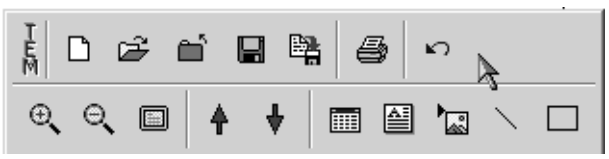
These tasks can be performed using menu commands on the File menu and Edit menus or speed buttons on the Template toolbar, shown below.

File Menu



Edit Menu

Template Toolbar



Tip

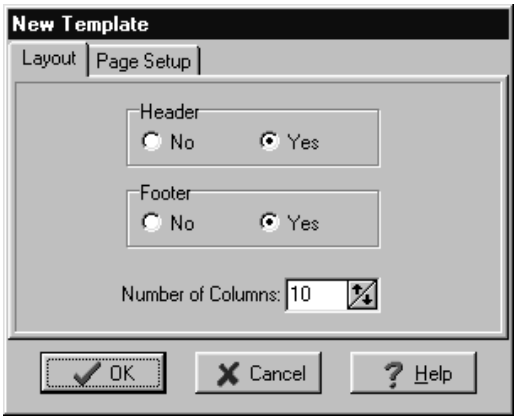
To make it easier to edit the template, the Template toolbar should be turned on if it is not currently displayed. If the Show Template Toolbar option in the View menu is not checked, click on the option to display the toolbar. If the Template toolbar is displayed in collapsed mode, then click on the "TEM" button to expand the toolbar.

Creating a New Template

Since templates are stored in the WinLoG master database, they can be created and edited at any time (no project has to be open). To create a template either·select the New Template menu item of the Templates sub menu of the File menu, or click the New button on the Template Toolbar.

After one of the above tasks is performed, the New Template form below will be displayed. This form has two tabs, one for the template layout and one for the page setup.

Layout Tab



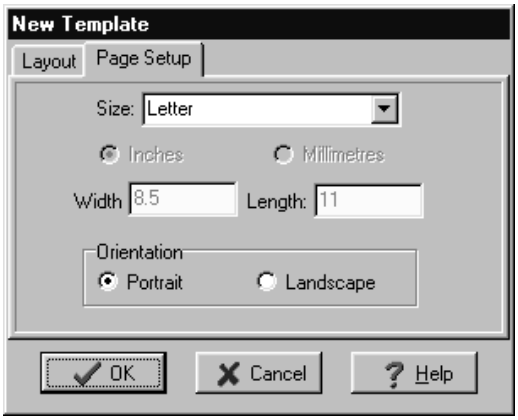
The following information can be entered on the Layout tab shown above:

Header: Select yes to include a header box at the top of the template.

Footer: Select yes to include a footer box at the bottom of the template.

Number of Columns: This is the number of columns to include in the template. Columns can also be added and deleted while editing the template.

Page Setup Tab



The following information can be entered on the Page Setup tab shown above:

Size: This is the page size of the template. When the arrow at the right is pressed, a list of available page sizes is displayed.

Inches or Millimeters: The units for the width and length of the page. These units will be used when specifying the layout of the legend. If the Page Size is "Custom", the units can be set to either inches or millimeters.

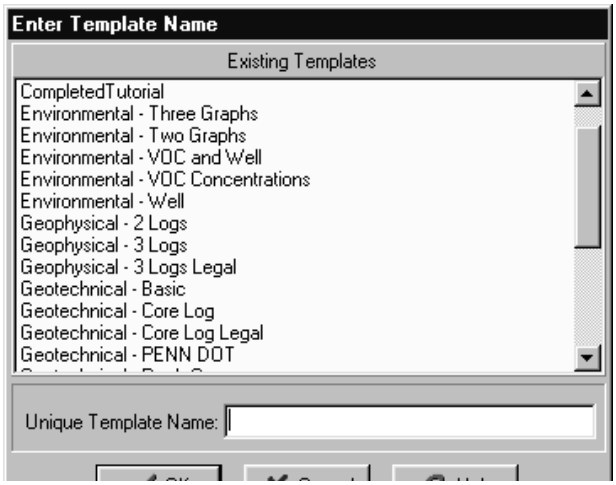
Custom Width: If the page size is specified as "custom", the page horizontal width in inches must be specified.

Custom Length: If the page size is specified as "custom", the page vertical length in inches must be specified.

Orientation: This is the orientation of the page; either portrait (longer side is vertical) or landscape (longer side is horizontal).

After the Ok button is pressed the new template will be displayed.

When this template is saved the Enter Template Name form shown below will be displayed. This form shows the current templates in the database. To save the template, enter a unique name for the new template and press the Ok button.



Editing a Template

To enter or edit data in a template, the template must first be created as described above or an existing template opened. Existing templates can be opened for editing by selecting the Open Template menu item of the Templates sub menu of the File menu, clicking the right mouse button and select the Open Template menu item from the popup menu, or clicking the Open button on the Template Toolbar.

After the template has been opened and displayed, the template data can be entered and edited as described in the sections below.

Tip

If no template or borehole log is currently displayed, the Open Template menu item can also be selected from the Project popup menu. This menu can be displayed by clicking the right mouse button.

Headers and Footers

The header and footer of the template are used to display general information about the borehole. This includes information about the borehole number, X and Y coordinates, text and memo information. Text and memo information can include information such as project name, location, client, date, drill method, etc. The difference between text data and memo data is that there is no limit to the length of memo data and memo data can contain rich text.

The header is usually located at the top of the page and the footer is usually located at the bottom of the page. There are no limits to the number of titles a header or footer can contain. Each title can be used to display text data, memo data, or a checkbox in the borehole log.

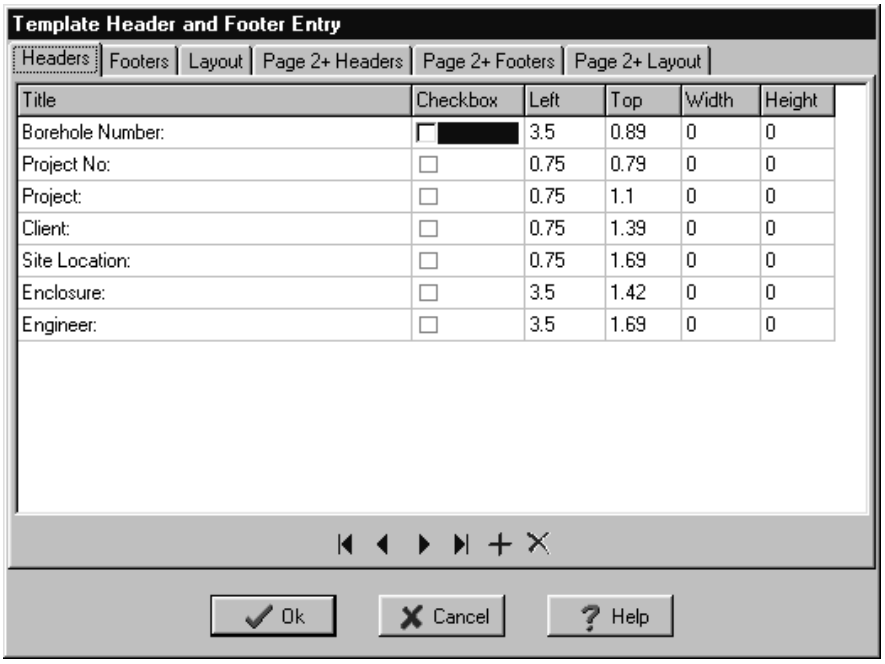
The template is used to control what borehole information is displayed in the header. Unlike previous versions of WinLoG, the general borehole data is now tied to the type of data in the template. This way if the template is edited or a different template is used the borehole data will move depending upon the location within the template. For example, if the data is for the location of the borehole and in the template the location is the first line of the header. If later the template is edited and the location is moved to the third line of the footer, when the borehole log is displayed the location will show up in the third line of the footer.

To edit the header or footer and display the Template Header and Footer Entry form shown below either:

- select the Header or Footer menu items from the Edit menu;
- right click the mouse button and select the Header or Footer menu items from the popup menu; or
- click the left mouse button inside the header or footer of the template.

After one of the above tasks has been completed, the Template Header and Footer Entry form shown on the next page will be displayed.

The Template Header and Footer Entry form has three tabs; one for the header, one for the footer, and one for the layout of the header and footer. If the template has two pages, this form will have six tabs as shown below, three for the first page and three for the second page. Data entry and editing for the second page is identical to the first page, which is described in detail below.



The buttons at the bottom of the tabs are used for the following:

The **Start** button moves to the first tile.

The **Previous** button moves to the previous title.

The **Next** button moves to the next title.

The **End** button moves to the last title.

The **Insert** button creates a new title.

The **Delete** button deletes the title.

Headers Tab

The Headers tab and Page 2+ Headers tab shown on the previous page can be used to edit the following information:

Current Title: This is the current title of the header line.

New Title: This is the new title to use for the header line (up to 255 characters). It defines the type of data for the borehole log. The title will be used to prompt for information when entering borehole data. If the title is for text data or a checkbox, it will be displayed on the borehole log. If the title is for memo data, it will not be displayed on the borehole log. If the title is, Sheet or Page the sheet number of the borehole log will be automatically filled in by the program.

Checkbox: If checked a checkbox will be displayed to the right of the title. This checkbox can then be checked and unchecked when entering borehole data.

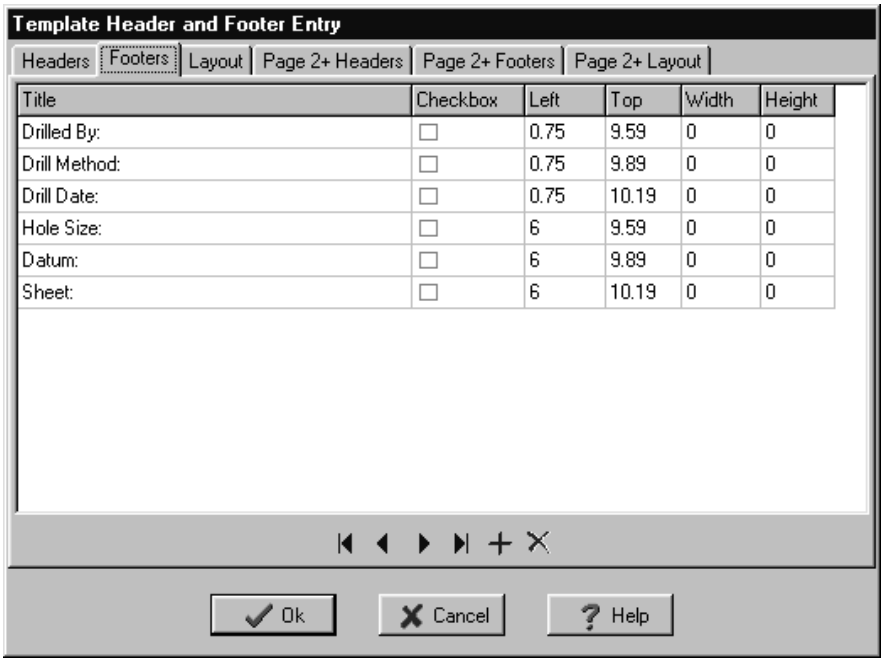
Left:This is the horizontal position of the title in inches or millimeters from the left side of the page. If the header is left justified, the title will start at this position. If the header is right justified, the title will end at this position. The units of measurement are specified in the page layout.

Top: This is the vertical position of the title in inches or millimeters from the top of the page.

Width: This is the horizontal width of the title and borehole data in inches or millimeters. If set to zero, then the width is not used. The width should only be used when specifying header lines for memo s.

Height: This is the vertical height of the title and borehole data in inches or millimeters. If set to zero, then the height is not used. The height should only be used when specifying header lines for memo data.

Footers Tab



The Footers tab and Page 2+ Footers tab shown above can be used to edit the following information:

Current Title: This is the current title of the footer line.

New Title: This is the new title to use for the footer line (up to 255 characters). It defines the type of data for the borehole log. The title will be used to prompt for information when entering borehole data. If the title is for text data or a checkbox, it will be displayed on the borehole log. If the title is for memo data, it will not be displayed on the borehole log. If the title is, Sheet or Page the sheet number of the borehole log will be automatically filled in by the program.

Checkbox: If checked a checkbox will be displayed to the right of the title. This checkbox can then be checked and unchecked when entering borehole data.

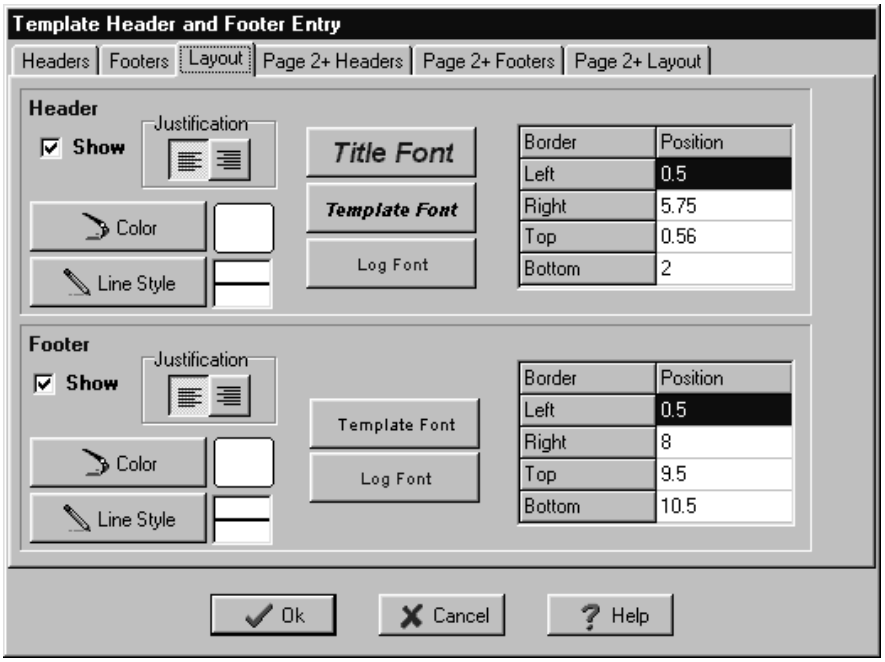
Left: This is the horizontal position of the title in inches or millimeters from the left side of the page. If the footer is left justified, the title will start at this position. If the footer is right justified, the title will end at this position. The units of measurement are specified in the page layout.

Top: This is the vertical position of the title in inches or millimeters from the top of the page.

Width: This is the horizontal width of the title and borehole data in inches or millimeters. If set to zero, then the width is not used. The width should only be used when specifying footer lines for memo data.

Height: This is the vertical height of the title and borehole data in inches or millimeters. If set to zero, then the height is not used. The height should only be used when specifying footer lines for memo data.

Layout Tab

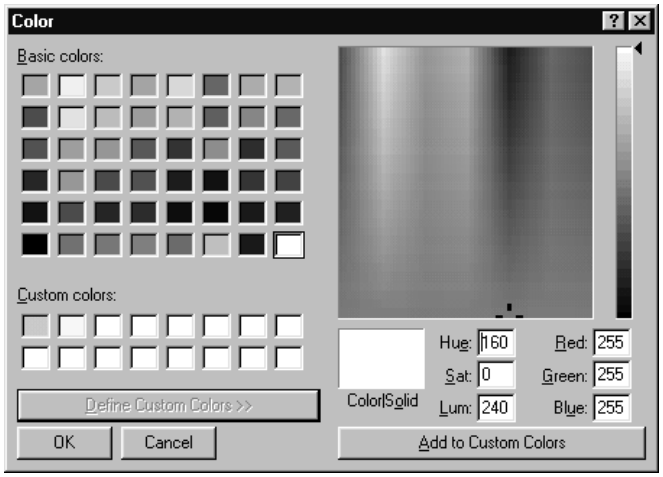


The Layout tab and Page 2+ Layout tab shown on the previous page can be used to edit the following header information:

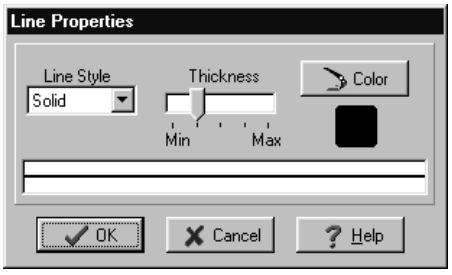
Show Header: If checked the header will be displayed on the template. If this is not checked the Header tab and fields below will not be displayed

Justification: This sets the justification of the header lines, either left or right justified.

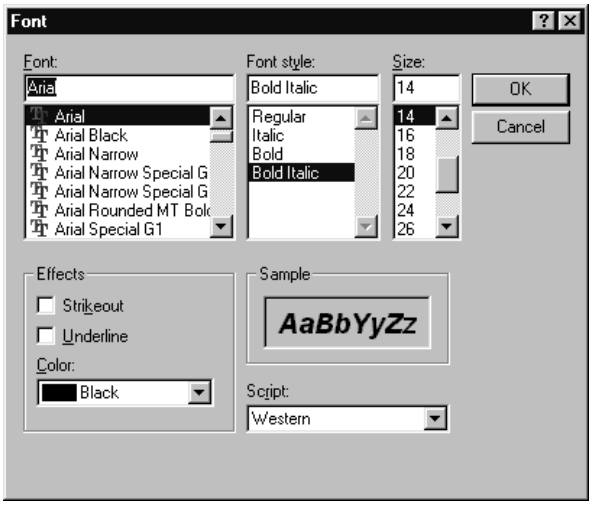
Color: This is the background color for the header block. When the Color button is pressed the Color form below will be displayed. Using this form a basic color can be selected or a custom color specified.



Line Style: This is the line style used to draw the border of the header. When the Line Style button is pressed, the Line Properties form on the next page will be displayed. This form can be used to set the line style, color, and width.



Title Font: This is the font to use when drawing the main title of the header. The main title is the first line of the header and is normally used for the borehole number. When the Title Font button is pressed the Font form below will be displayed. This form can be used to set the font name, font size, font style, and color.



Template Font: This is the font to use when drawing the titles of the header, other then the main title. When the Template Font button is pressed the Font form on the previous page will be displayed. This form can be used to set the font name, font size, font style, and color.

Log Font: This is the font to use when drawing the borehole data of the header, other then the main title. When the Log Font button is pressed the Font form will be displayed. This form can be used to set the font name, font size, font style, and color.

Left: This is the position of the left border of the header in inches or millimeters from the left side of the page. The units of measurement are specified in the page layout.

Right: This is the position of the right border of the header in inches or millimeters from the left side of the page.

Top: This is the position of the top border of the header in inches or millimeters from the top of the page.

Bottom: This is the position of the bottom border of the header in inches or millimeters from the top of the page.

The Layout tab and Page 2+ Layout tab can also be used to edit the following footer information:

Show Footer: If checked the footer will be displayed on the template. If this is not checked the Footer tab and fields below will not be displayed

Justification: This sets the justification of the footer lines, either left or right justified.

Color: This is the background color for the footer block. When the Color button is pressed the Color form will be displayed. Using this form, a basic color can be selected or a custom color specified.

Line Style: This is the line style used to draw the border of the footer. When the Line Style button is pressed, the Line Properties form will be displayed. This form can be used to set the line style, color, and width.

Template Font: This is the font to use when drawing the titles of the footer. When the Template Font button is pressed the Font form above will be displayed. This form can be used to set the font name, font size, font style, and color.

Log Font: This is the font to use when drawing the borehole data of the footer. When the Log Font button is pressed the Font form will be displayed. This form can be used to set the font name, font size, font style, and color.

Left: This is the position of the left border of the footer in inches or millimeters from the left side of the page. The units of measurement are specified in the page layout.

Right: This is the position of the right border of the footer in inches or millimeters from the left side of the page.

Top: This is the position of the top border of the footer in inches or millimeters from the top of the page.

Bottom: This is the position of the bottom border of the footer in inches or millimeters from the top of the page.

Moving Titles

The header and footer titles can be positioned using the Headers and Footers Entry form or by moving them with the mouse. To move them with the mouse, position the mouse over the text and hold down the left mouse button. Then drag the text to the desired location. When the mouse button is over the header title, it will change to a rectangle with an arrow.

Sizing the Header and Footer

The size of the header and footer can be changed using the Layout tab discussed above or the mouse. To adjust the size using the mouse follow the procedure below.

1. Position the cursor at the boundary of the header or footer. The cursor should change to a set of arrows and the Status line should display ?Edit Size of Header/Footer." The orientation of the arrows will indicate the direction that the boundary can be changed.

2. Press and hold the left mouse button down, and drag the boundary to its new position.

3. While dragging the boundary, a rectangle will be displayed showing its current location.

4. When the boundary is in the desired location, release the left mouse button.

Columns

The columns of the borehole log are used to display all of the depth-related data. There is no limit to the number of columns that can be displayed in a borehole log. A wide variety of columns can be displayed in WinLoG. Templates can contain multiple depth, text, graph, and well columns. Below is a list of the different type of columns:

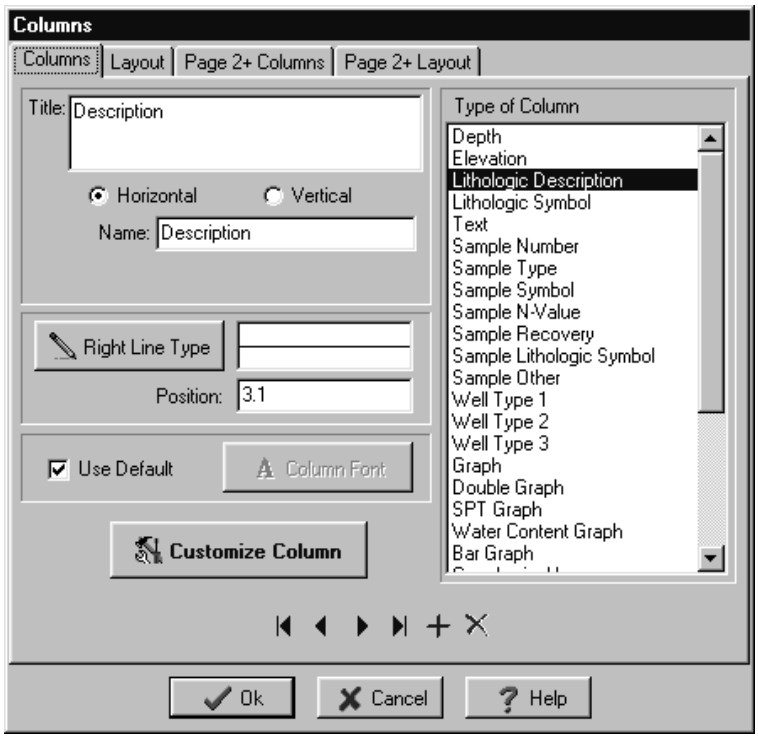
- depth,
- elevation,
- lithologic symbol,
- lithologic description,
- text,
- text interval,
- linked text interval,
- constituent,
- member,
- facies,
- symbol,
- sample number,
- sample type,
- sample symbol,
- sample N-value (blows/ft),
- sample recovery,

- sample lithologic symbol,
- other sample data,
- type 1 well diagrams,
- type 2 well diagrams,
- type 3 well diagrams,
- Standard Penetration Test graph data,
- Water Content graph data,
- double graphs,
- single graphs,
- bar graphs (histograms),
- single geophysical graphs,
- double geophysical graphs.
- deviation survey
- percent cuttings
- core photo

The template is used to control what borehole data is displayed in the columns. Unlike previous versions of WinLoG, the borehole data is now tied to the type of data in the template. This way if the template is edited or a different template is used the borehole data displayed in the column will move depending upon the location within the template. For example, the lab analysis data is displayed in the third column of the template as text data. If later the template is edited and the lab analysis is moved to the fifth column, when the borehole log is displayed the lab analysis will show up in the fifth column.

To edit the a column and display the Columns form shown on the next page either select the Columns menu item from the Edit menu or click the left mouse button inside the column of the template.

The Columns form has two tabs; one for the columns and one for the layout of the columns. If the template has two pages, this form will have four tabs as shown below, two for the first page and two for the second page. Data entry and editing for the second page is identical to the first page, which is described in detail below.



The buttons at the bottom of the tabs are used for the following:

The **Start** button moves to the first column.

The **Previous** button moves to the previous column.

The **Next** button moves to the next column.

The **End** button moves to the last column.

The **Insert** button creates a new column.

The **Delete** button deletes the column.

Columns Tab

The Columns tab and Page 2+ Columns tab shown above can be used to edit the following information:

Type of Column: Select the type of column from the list of available column types. For a detailed description of the data that can be entered in each column type, see Chapter 4.

Title: This is the title to display for the column (up to 255 characters). The title does not have to be the same as the column name and does not have to be unique. To display the title on more than one line use the Enter key. For graph columns, the title can also be entered on the Graph Properties form using the Customize button.

Horizontal: Check to display the title horizontally.

Vertical: Check to display the title vertically.

Name: This is the unique name to use for the column (up to 100 characters). The name can be the same as the title. Text, graph, and well data entered for boreholes will be stored using this name.

Name2: This is the unique name to use for the second graph, geophysical log, or linked text interval. If the column type is "Double Graph" or "Double Geophysical Log" this field is used to specify the name of the second graph. If the column type is “Text Interval”, “Facies”, “Constituents”, or “Members” this field is used to specify the name of the linked text interval. If left blank then the column will not be part of a linked text interval. Otherwise, all columns that have the same Name2 will be part of the same linked text interval.

Right Line Type: This is the line style to use for the right border of the column. The line style of the left border will be controlled by the previous column. To change the line style, press the Right Line Type button. A Line Properties form will be displayed. This form can be used to set the line style, width, and color.

Position:This is the position of the right column border in inches or millimeters from the left side of the page. The units of measurement are specified in the page layout.

Use Default Font: This should be checked to use the default column font specified in the layout tab. If this is checked, the Column Font button will not be enabled.

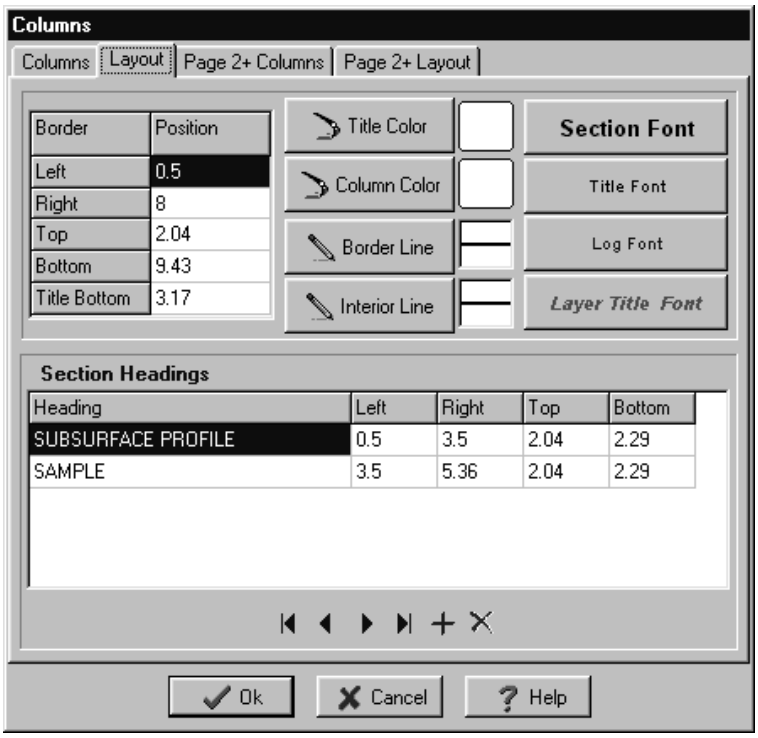
Tip

When specifying the Name it must match exactly what is in WinLoG.

Column Font: Press this button to change the font to use for this column. Each column can use a different font if desired. The title of the column will still be displayed in the default column font. However, all of the column data will use this font. When pressed the Font form on the next page will be displayed. This form can be used to select the font name, font style, font size, and color.

Customize: Depending upon the type of column, this button will be enabled or disabled. If the column can be customized it will be enabled. Press the button to customize the specific properties of the column. The form displayed will depend on the type of column as described in the next section.

Layout Tab



The Layout tab and Page 2+ Layout tab shown above can be used to edit the following information:

Left: This is the position of the left border of the column block in inches or millimeter from the left side of the page. The units of measurement are specified in the page layout.

Right: This is the position of the right border of the column block in inches or millimeters from the left side of the page.

Top: This is the position of the top border of the column block in inches or millimeters from the top of the page.

Bottom: This is the position of the bottom border of the column block in inches or millimeters from the top of the page.

Title Bottom: This is the position of the bottom of the title portion of the column block in inches or millimeters from the top of the page.

Title Color: This is the color to use for the title block of the columns. Press the button to change the color. A Color form will be displayed (shown in the previous section) and a basic or custom color can be selected.

Column Color: This is the color to use for the data block of the columns. Press the button to change the color. A Color form will be displayed (shown in the previous section) and a basic or custom color can be selected.

Border Line: This is the line style to use for the border of the column block. When the button is pressed a Line Properties form will be displayed (shown in the previous section). Using this form the line style, width, and color can be selected.

Interior Line: This is the line style to use for the interior lines of the column block. These lines include the section title borders and bottom border of the titles. When the button is pressed a Line Properties form will be displayed (shown in the previous section). Using this form the line style, width, and color can be selected.

Section Font: This is the font to use for the section headings shown at the top of the column block and defined below. When the button is pressed a Font form (shown in the previous section) will be displayed. Using this form the font name, style, size, and color can be selected.

Title Font: This is the font to use for the titles shown at the top of the column block and defined in the Columns tab. When the button is pressed a Font form (shown in the previous section) will be displayed. Using this form the font name, style, size, and color can be selected.

Log Font: This is the default font to use for the log data in the columns. Individual fonts can be defined for each column in the Columns tab. When the button is pressed a Font form (shown in the previous section) will be displayed. Using this form the font name, style, size, and color can be selected.

Layer Title Font: This is the font to use for the titles of the lithologic layers of the borehole data. When the button is pressed a Font form (shown in the previous section) will be displayed. Using this form the font name, style, size, and color can be selected.

Section Headings

Sections are used to group a set of similar columns together such as, sample data or layer data. The section titles are displayed at the top of the column titles. There is no limit to the number of section headings that can be used. The Layout tab and Page 2+ Layout tab shown in the previous section can be used to edit the following section heading information:

Heading: This is the text to display in the section heading (up to 255 characters).

Left: This is the position of the left side of the section heading in inches or millimeters from the left side of the page. The units of measurement are specified in the page layout.

Right: This is the position of the right side of the section heading in inches or millimeters from the left side of the page.

Top: This is the position of the top side of the section heading in inches or millimeters from the top of the page. Normally this will be the same as the top border of the column block.

Bottom: This is the position of the bottom side of the section heading in inches or millimeters from the top of the page.

The buttons at the bottom of the Section Headings are used for the following:

The **Start** button moves to the first section heading.

The **Previous** button moves to the previous section heading.

The **Next** button moves to the next section heading.

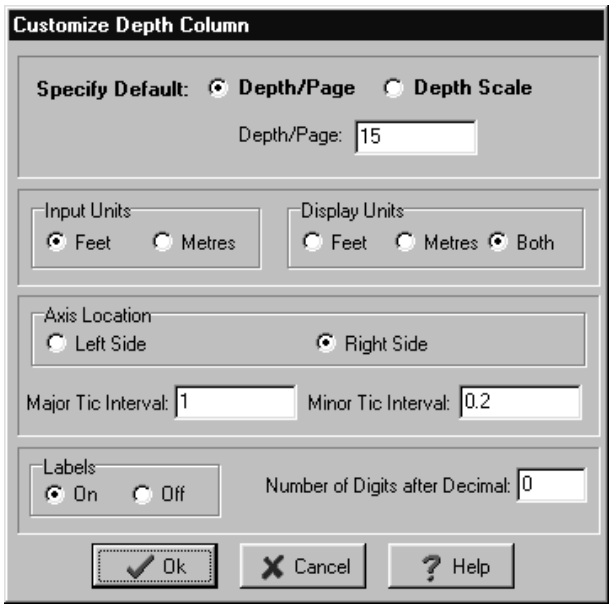
The **End** button moves to the last section heading.

The **Insert** button creates a new section heading.

The **Delete** button deletes this section heading.

Depth Column

The depth column of the template can be customized to set the plot depth per page, input units, and depth axis format. To customize the depth axis, select the Depth column and click on the Customize button on the Columns tab.



The Customize Depth Column form displayed above can be used to set the following parameters:

Default Plot Depth/Page or Depth Scale: The plot depth or scale determines the number of feet or meters that is displayed on each borehole log sheet. This scale can be specified either as the depth to plot per page or the depth scale.

Depth/Page: If the depth per page is selected there will be an input field for the depth/page. The depth per page specified in the template normally determines the plot depth per page; however, this can be overridden in the log by specifying a depth per page when editing the log.

Depth Scale: If the depth scale is selected there will be an input field for the scale factor. The scale factor is specified such that 1 unit on the page is equal to a specified number of units of the log. The units are determined from the display units.

Input Units: This is the units that will be used when entering depths for borehole log data. The input units do not have to be the same as the display units.

Display Units: This is the display units of the depth axis. They can be feet, meters, or both. These units do not have to be the same as the input depth units. If both are specified, then the depth axis will have feet displayed on the left and meters displayed on the right.

Axis Location: The depth axis can be located on the left or right side of the depth column. If it is located on the left side of the column, the labels will appear on the right side of the tics. If it is located on the right side of the column, the labels will appear on the left side of the tics.

Major Tic Interval: This is depth interval between labels on the depth axis.

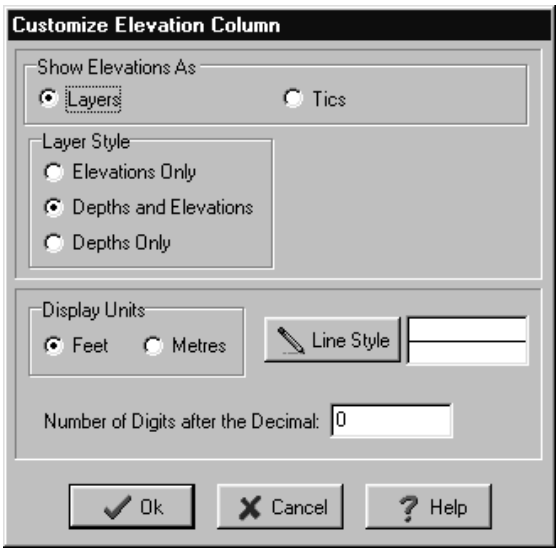
Minor Tic Interval: This is the depth interval between tics on the depth axis.

Labels: This is used to turn the depth labels on and off. If the labels are turned off the depth axis will be drawn with tics only.

Number of Digits after Decimal: This is the number of digits to display after the decimal in the labels. For example, if the number of digits is 1, then the depth 2 feet will be labeled as 2.0.

Elevation Column

The style of the elevation column can be changed, by selecting the Elevation column and using the Customize button on the Columns tab. When the Customize button is pressed the Customize Elevation Column form below will be displayed.



The Customize Elevation Column form above can be used to set the following parameters:

Show Elevations As: Elevations can be displayed as "layers" or "tics". If "layers" is selected, a line will be drawn across the elevation column at each layer boundary and the elevation displayed. If "tics" is selected the elevation will be displayed at regular intervals similar to the depth column.

Layer Style: If the elevations are displayed as "layers", then "elevation only", "elevation and depth", or “depths only” can be displayed at each layer boundary. If the elevations are displayed as "tics", this field will not appear.

Major Tic Interval: This is depth interval between labels on the elevation axis. If elevations are displayed as "layers" this field will not appear.

Minor Tic Interval: This is depth interval between tics on the elevation axis. If elevations are displayed as "layers" this field will not appear.

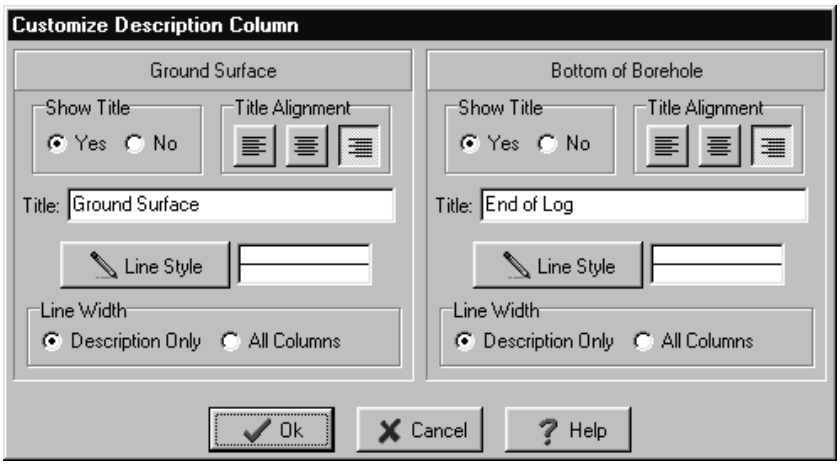
Display Units: This is the units to use to display the elevation column. The display units do not have to be the same as input units.

Line Style: This is the line style to use when drawing the layer boundaries or tics in the elevation column. When the Line Style button is pressed, a Line Properties form will be displayed (shown in the Columns section). This form can be used to set the line style, width, and color.

Number of Digits after the Decimal: This is the number of digits to display after the decimal in the labels. For example, if the number of digits is 1, then the elevation 101 feet will be labeled as 101.0.

Lithologic Description Column

The style of the lithologic description column can changed, by selecting the column and using the Customize button on the Columns tab. When the Customize button is pressed the Customize Description Column form below will be displayed.



The Customize Description Column form can be used to set the following parameters:

Show Ground Surface Title: This determines whether to display a title for the ground surface. The ground surface title is displayed in the lithologic description column at the top of the log. If the show title option is turned off the borehole log will start immediately after the column title block. Otherwise, there will be a small gap between the column title block and the start of the log to display the ground surface title.

Ground Surface Title: This is the title to display for the ground surface (up to 255 characters). To leave a gap without displaying a title, set the Show Ground Surface Title to "yes" and leave the title blank. If Show Ground Surface Title is set to "no" this field will not be displayed.

Show End of Borehole Title: This determines whether to display a title at the end of the borehole. The end of borehole log title is displayed in the layer description column at the bottom of the log.

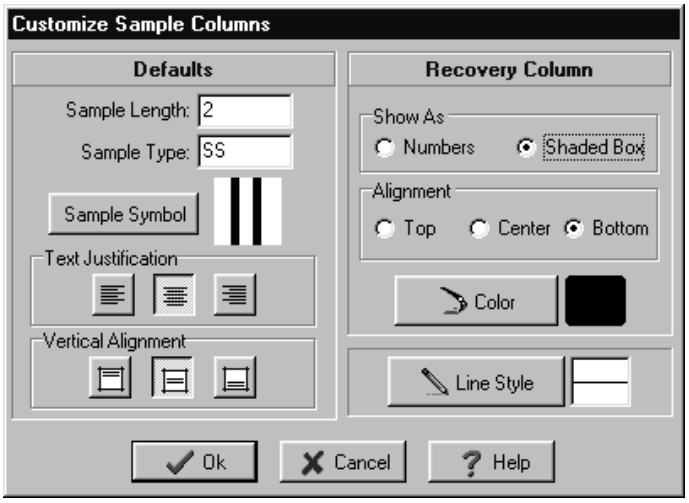
End of Borehole Title: This is the title to display at the end of the borehole (up to 255 characters). The depth of the borehole can be included in the title by specifying the keyword "[depth]" in the title. For example, the title "Borehole Terminated at [depth] feet" would be shown on the borehole log as "Borehole Terminated at 30 feet" for a 30 foot deep borehole. If Show End of Borehole Title is set to "no" this field will not be displayed.

Title Alignment: The alignment of the titles can be left justified, centered, or right justified.

Line Style: This is the style of the line used to draw the ground surface and bottom of the borehole. To change the line style, press the Line Style button. A Properties form will be displayed (shown in the Columns section). This form can be used to set the line style, width, and color.

Sample Columns

The recovery column style and sample default parameters for the sample columns can be changed, by selecting the column and using the Customize button on the Columns tab. These columns include the Sample Number, Type, Symbol, N-Value, Recovery, Sample Lithologic Symbol, and Other. When the Customize button is pressed the Customize Sample Columns form below will be displayed.



The Customize Sample Columns form can be used to set the following defaults:

Sample Length: This is the default length to use when entering samples. For a typical split spoon sampler this would be 2 feet.

Sample Type: This is the default text used to describe the sample type when entering samples in a log.

Sample Symbol: This is the default symbol to use when entering samples. The symbol can be changed by pressing the Sample Symbol button.

Text Justification: This is the justification to use for displaying the sample number, type, N-Value, and other data.

Vertical Alignment: This the vertical alignment of the text within the sample. It is used for the sample number, type, N-Value, and other data.

Show As: The sample recovery can be displayed as a number or as a shaded box representing the percentage of recovery. When calculating the percentage of sample recovery, the program assumes that if the recovery number is greater than the sample size then the number is a percentage; otherwise it will assume the number is a length.

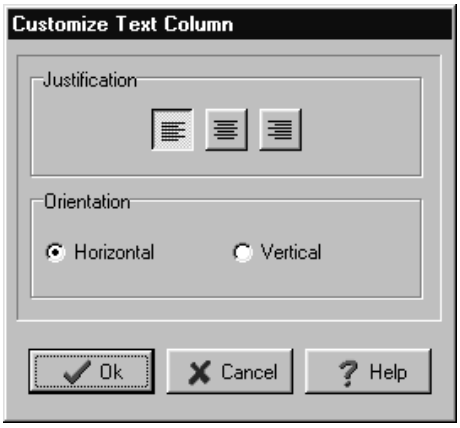
Alignment: If the recovery is displayed as a shaded box then the box can be aligned at the top, center, or bottom of the sample. If the recovery is displayed as a number this field will not appear.

Color: This is the color of the shaded box to use for the recovery. If the recovery is displayed as a number this field will not appear.

Line Style: This is the default line style to use for the top and bottom of the sample. To change the line style, press the Line Style button. A Line Properties form will be displayed (shown in the Columns section). This form can be used to set the line style, width, and color.

Text Columns

The text column style can be changed, by selecting the column and using the Customize button on the Columns tab. When the Customize button is pressed the Customize Text Column form below will be displayed.



The Customize Text Column form can be used to set the following defaults:

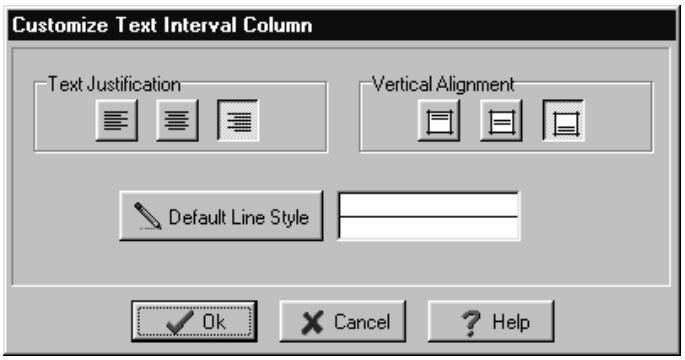
Justification: The text can be justified left, center, or right within the column. This justification only applies to text lines, and will not apply to memos entered in the text column.

Orientation: The text can be oriented either horizontally or vertically. This orientation only applies to text lines, and will not apply to memos.

Text Interval Columns

The text interval column style can be changed, by selecting the column and using the Customize button on the Columns tab. When the Customize button is pressed the Customize Text Interval Column form on the next page will be displayed.

This form is also displayed for the Facies, Constituents, and Members columns. These columns use the same defaults as the text interval columns.



The Customize Text Column form can be used to set the following defaults:

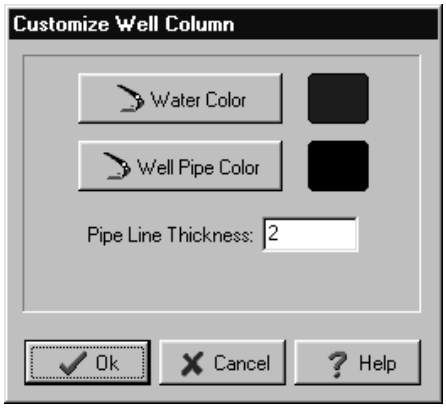
Justification: The text can be justified left, center, or right within the column. This justification only applies to text lines, and will not apply to memos entered in the text column.

Orientation: The text can be oriented either horizontally or vertically. This orientation only applies to text lines, and will not apply to memos.

Default Line Style: This is the default line style to use for the top and bottom of the text interval. To change the line style, press the Line Style button. A Line Properties form will be displayed (shown in the Columns section). This form can be used to set the line style, width, and color.

Well Columns

The colors and line thickness of the water and well materials for Well Types 2 and 3 can be changed, by selecting the column and using the Customize button on the Columns tab. When the Customize button is pressed the Customize Well Column form below will be displayed.



The Customize Well Column form can be used to set the following defaults:

Water Color: This is the color that will be used to draw the water table symbol in the well. In a Well Type 3 column this can be changed when entering the borehole data. To change the color, press the Water Color button. A Color form will be displayed, and either a basic or a custom color can be specified

Well Pipe Color: This is the color to use when drawing pipes and screens in the well. In a Well Type 3 column this can be changed when entering the borehole data. To change the color, press the Well Pipe Color button. A Color form will be displayed, and either a basic or a custom color can be specified.

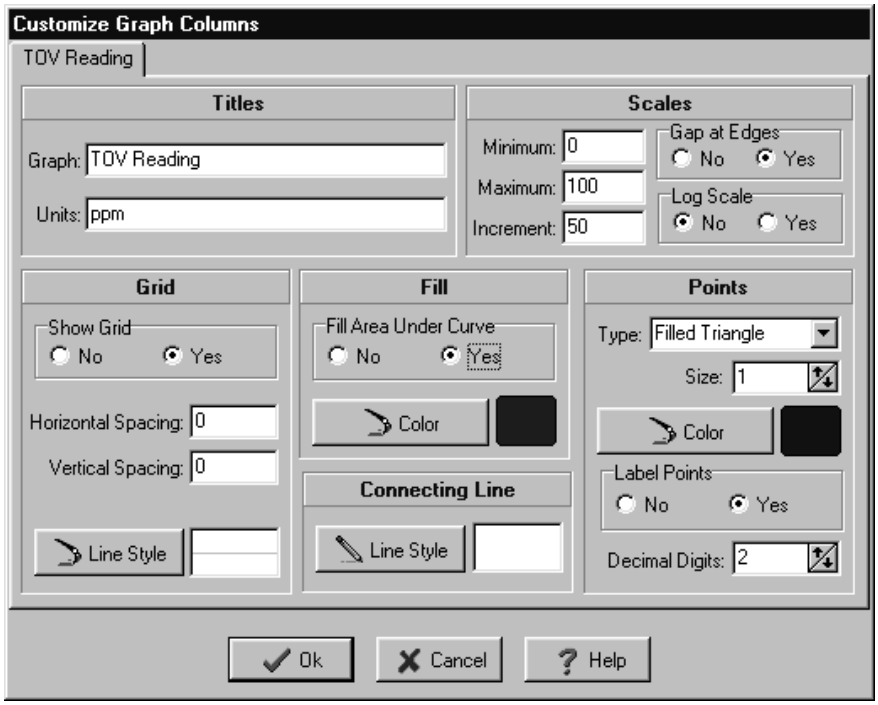
Pipe Line Thickness: This is the width of the line to use when drawing pipes and screens. In a Well Type 3 column this can be changed when entering the borehole data.

Fitting Line Thickness: This is the width of the line to use when drawing fittings.

Graph and Geophysical Columns

The format of Graph, Double Graph, SPT Graph, Water Content Graph, Bar Graph, Geophysical Log, Double Geophysical Log, and Lithologic Cross-Plot columns can be changed, by selecting the column and using the Customize button on the Columns tab. When this button is pressed the Customize Graph Columns form below will be displayed.

If the column type is a double graph or double geophysical log, then the Customize Graph Columns form will have two tabs as shown on the next page. Each tab is used for one of the graphs or geophysical logs. The data entry for both tabs is identical.



The Customize Graph Columns form can be used to set the following parameters:

Graph Title: This is the title to use for the graph (up to 255 characters). The Graph Title will be displayed in the same area as the Column Title. It is recommended that either the Graph Title or Column Title be used, and not both. If the column type is a double graph or double geophysical log, then both Graph Titles will be displayed over top of each other.

Units Title: This is the units of the graph (up to 255 characters). The unit title will be displayed below the graph title.

Minimum: This is the minimum value for the horizontal axis of the graph. If the value is zero, the program will calculate the minimum value based on the data specified.

Maximum: This is the maximum value for the horizontal axis of the graph. If the value is zero, the program will calculate the maximum value based on the data specified.

Increment: This is the increment to use for labeling the horizontal axis of the graph. If the value is zero, the program will calculate the increment based on the data specified.

Gap at Edges: This is used to select whether there should be a gap on the left and right sides of the column. By putting a gap on the sides there will be room to display the minimum and maximum labels of the graph within the column.

Log Scale: The horizontal axis can have either a linear or a logarithmic scale.

Show Grid: To draw horizontal and vertical grid lines, set Show Grid to yes.

Horizontal Spacing: This is the horizontal spacing of the grid lines, usually the same as the scale increment. If set to zero, the scale increment will be used. If Show Grid is set to no, this field will not appear.

Vertical Spacing: This is the vertical spacing of the grid lines, usually the same as the scale increment. If set to zero, the scale increment will be used. If Show Grid is set to no,this field will not appear.

Grid Line Style: This is the line style to use to draw the grid. When the Line Style button is pressed a Line Properties form will be displayed. This form can be used to set the line style, width, and color.

Fill Area Under Curve: The curve formed by the graph points can be filled with a solid color. The fill will be between the left side of the column and the curve.

Fill Color: This is the color to use for the fill. When the Color button is pressed a Color form will be displayed. This form can be used to select a basic or custom color. If Fill Area Under Curve is set to "no", this field will not appear.

Connecting Line Style: The data points for the graph can be connected by a line. To change the line style, press the Line Style button. A Line Properties form will be displayed. This form can be used to select the line style, width, and color. If the line style is set to "none", no line will connect the points.

Point Type: The graph data can be shown as circles, crosses, squares, squares, triangles, or inverted triangles. To not show the data points, select "none". If this is a Bargraph column, the point type is set to "none" and this field will not appear.

Point Size: This is the size of the data points. If the Point Type is set to 'none, this field will not appear.

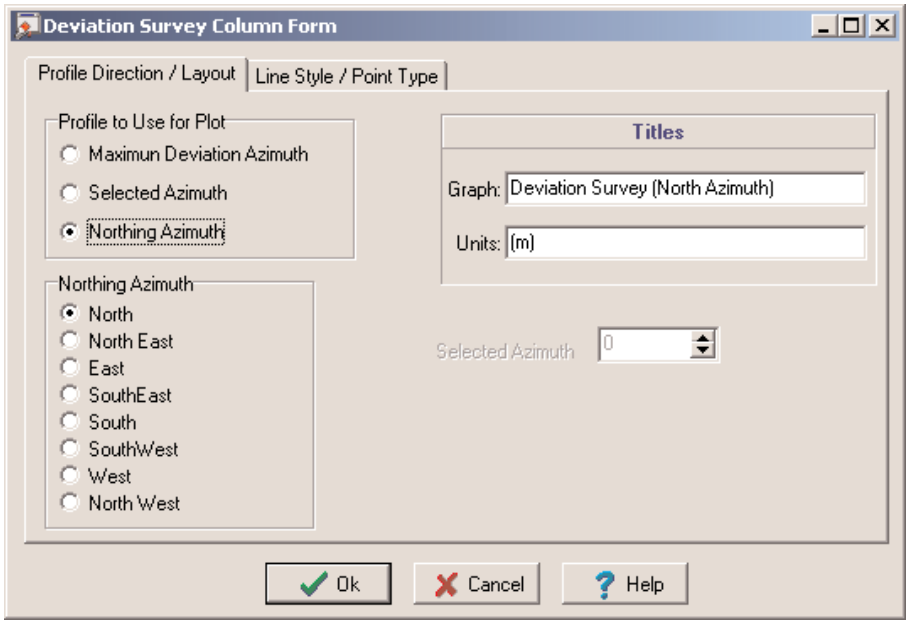
Point Color: This is the color of the data points. To change the color, press the Color button. A Color form will be displayed. This form can be used to select a basic color or a custom color. If the Point Type is set to "none", this field will not appear.

Label Points: The values of the data points can be drawn above each point. If the data value is less than the minimum value, the value will be shown with a "<" symbol. If the data value is greater than the maximum value, the value will be shown with a ">" symbol. If the Point Type is set to "none", this field will not appear.

Decimal Digits: When Label Points is turned on, this is the number of digits to show after the decimal in the labels. If Label Points is turned off this field is not displayed.

Deviation Survey Column

The style of the Deviation Survey column can be changed by selecting the column and using the Customize button on the Columns tab. When the Customize button is pressed the Deviation Survey Columns form below will be displayed.



The Deviation Survey Form can be used to set the following parameters on the Profile Direction/Layout tab shown on the previous page:

Profile To Use for the Plot: This is the profile type that is used to draw the Deviation Survey. There are three choices:

1) Maximum Deviation Azimuth
2) Selected Azimuth
3) Northing Azimuth

Maximum Deviation Azimuth: This is the azimuth of maximum borehole deviation as calculated by WinLoG using the borehole Deviation survey data.

Selected Azimuth Field: If the user selects the profile type as Selected Azimuth then this field is enabled and the user can select any Azimuth between 0 and 360 degrees to draw the deviation survey profile **.**

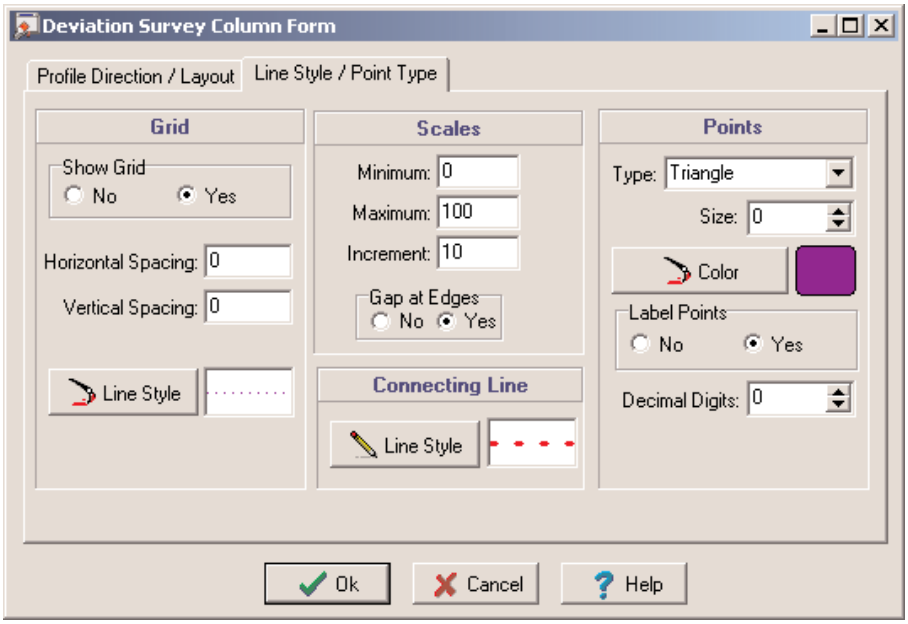
Northing Azimuth Radio Button: If the user selects the profile type as Northing Azimuth then this radio button is enabled and the user can select any of the eight Northings list to draw the deviation survey profile**.**

Profile Title: This is the title to use for the Deviation Survey Column (up to 255 characters). The title will be displayed in the same area as the Column Title. It is recommended that either the Profile Title or Column Title be used, and not both.

Units Title: This is the units of the Deviation Survey (up to 255 characters). The unit title will be displayed below the Profile title.

The following information can be specified on the Line Style/Point Type tab shown on the next page:

Minimum: This is the minimum value for the horizontal axis of the profile. If the value is zero, the program will calculate the minimum value based on the data specified.



Maximum: This is the maximum value for the horizontal axis of the profile. If the value is zero, the program will calculate the maximum value based on the data specified.

Increment: This is the increment to use for labeling the horizontal axis of the profile. If the value is zero, the program will calculate the increment based on the data specified.

Gap at Edges: This is used to select whether there should be a gap on the left and right sides of the column. By putting a gap on the sides there will be room to display the minimum and maximum labels of the profile within the column.

Show Grid: To draw horizontal and vertical grid lines, set Show Grid to yes.

Horizontal Spacing: This is the horizontal spacing of the grid lines, usually the same as the scale increment. If set to zero, the scale increment will be used. If Show Grid is set to no, this field will not appear.

Vertical Spacing: This is the vertical spacing of the grid lines, usually the same as the scale increment. If set to zero, the scale increment will be used. If Show Grid is set to no,this field will not appear.

Grid Line Style: This is the line style to use to draw the grid. When the Line Style button is pressed a Line Properties form will be displayed. This form can be used to set the line style, width, and color.

Connecting Line Style: The data points for the profile can be connected by a line. To change the line style, press the Line Style button. A Line Properties form will be displayed. This form can be used to select the line style, width, and color. If the line style is set to "none", no line will connect the points.

Point Type: The profile data can be shown as circles, crosses, squares, squares, triangles, or inverted triangles. To not show the data points, select "none".

Point Size: This is the size of the data points. If the Point Type is set to 'none', this field will not appear.

Point Color: This is the color of the data points. To change the color, press the Color button. A Color form will be displayed. This form can be used to select a basic color or a custom color. If the Point Type is set to "none", this field will not appear.

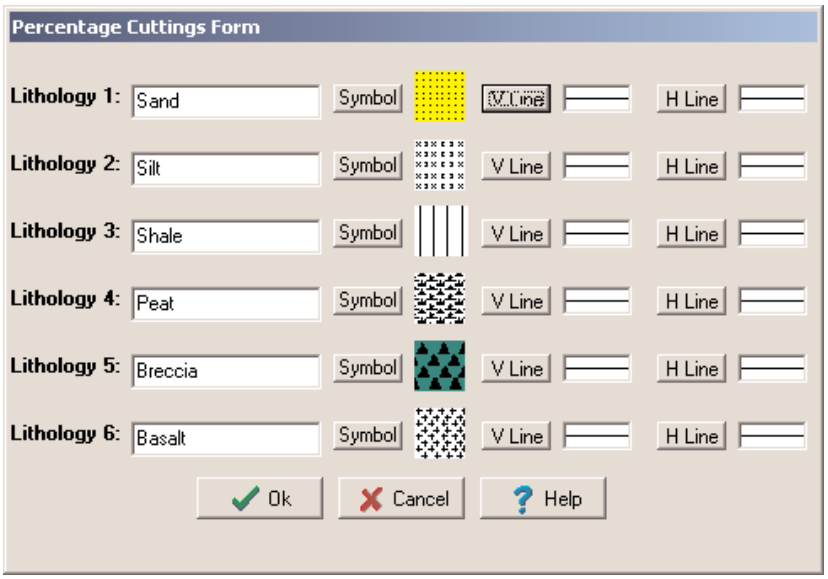
Label Points: The values of the data points can be drawn above each point. If the data value is less than the minimum value, the value will be shown with a "<" symbol. If the data value is greater than the maximum value, the value will be shown with a ">" symbol. If the Point Type is set to "none", this field will not appear.

Decimal Digits: When Label Points is turned on, this is the number of digits to show after the decimal in the labels. If Label Points is turned off this field is not displayed.

Percent Cuttings Column

Percent cuttings data are collected normally during mud-logging and are used to denote the relative percentage of different lithologies at a depth. For example, the relative percentages of sand, shale, and silt may be entered at several depth intervals. The lithologies that can be entered for the percent cuttings are specified in the percent cuttings column of the template. The symbols for each of the lithologies will be scaled and drawn at each of the depth intervals.

The style of the Percent Cuttings column can be changed by clicking on the column and then on the Customize button on the Columns form. The Percentage Cuttings form below will be displayed.



The Percentage Cuttings form is used to specify the lithologies that will be used in the column. Up to 6 lithologies maybe added to the Percentage Cuttings form. These are listed as Lithology 1 to Lithology 6 on the percentage cuttings form.

The following can be specified for each of the six lithologies:

Name: This is the name of the lithology, it will be displayed when entering data for the log.

Symbol: This is the symbol to use for the lithology.

V Line: This is the vertical line that separates the current lithology from the next lithology in the Percent Cuttings Graph.

H Line: This is the horizontal line that separates the current lithology from the next lithology in the Percent Cuttings Graph.

Core Photo Column

Core photo columns are used to display photos taken of cores at different depths or can be used to display photos taken inside the borehole itself. The photos can be in either BMP or JPEG format, and should be tied to a particular depth in the borehole.

The style of the Core Photo column can be changed by clicking on the column and then on the Customize button on the Columns form. The Customize Core Photo Column below will be displayed.

This form can be used to adjust the Image Settings between the following:

Do Not Stretch: Using this setting the image will not be stretched at all and will be clipped if it extends outside of the column. The image will be tied to the specified top depth and will extend to a depth according to the size of the image.

Stretch to Fit Column Width and Height: Using this setting the image will be stretched such that it fits within the width of the column and extends from the specified top depth to the specified bottom depth.

Stretch While Maintaining Aspect Ratio: Using this setting the image will be stretched such that it extends from the specified top depth to the specified bottom depth. The aspect ratio of the image will be maintained during this stretching, such that the vertical and horizontal stretches are the same. This may result in the image being clipped when it extends outside of the column horizontally.

Changing the Column Widths

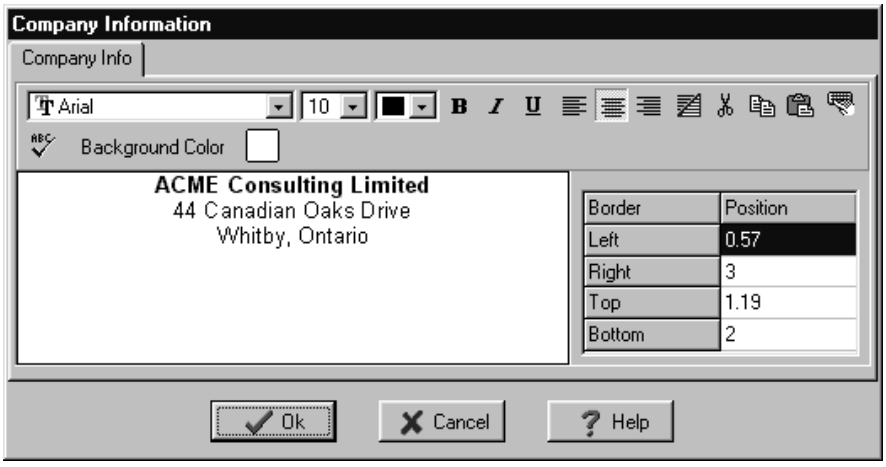
The width of each column can be changed using the Column tab or using the mouse. To change the column width with the mouse, place the cursor over the vertical column boundary (the Columns form should not be displayed when doing this). The cursor will change to a double arrow. While holding down the left mouse button, drag the column boundary to the desired position. When positioning column boundaries do not cross over the boundaries of the next column, since this can cause difficulties entering data.

Changing the Section Heading Size

The size of the section headings can be changed using the Layout tab of the Columns form or the mouse. To change the size with the mouse, place the cursor over the section-heading boundary. The cursor will change to a double arrow. While holding down the left mouse button, drag the boundary to the desired position.

Company Name

The company name and address can be shown anywhere on a template. To edit the company name and display the Company Information form shown below either select the Company menu item from the Edit menu or click the left mouse button inside the company information of the template.



This form can be used to show the following information:

Company Info: This is the text to use for the company name and address. To not show any company information, keep this area blank. There is no limit to the size of the company information and the information can contain rich text.

Left: This is the position of the left border of the company information in inches or millimeters from the left side of the page. The units of measurement are specified in the page layout.

Right: This is the position of the right border of the company information in inches or millimeters from the left side of the page.

Top: This is the position of the top border of the company information in inches or millimeters from the top of the page.

Bottom: This is the position of the bottom border of the company information in inches or millimeters from the bottom of the page.

Paragraphs

Floating paragraph text boxes can be added anywhere on a template. These text boxes are displayed over top of any information on the template. There is no limit to the number of paragraph text boxes that can be displayed. These boxes can overlap boundaries between the header, footer, and columns. Paragraph text boxes are typically used to add comments or a legend.

Adding a Paragraph

There are two methods that can be used to add a Paragraph Text box to a template:

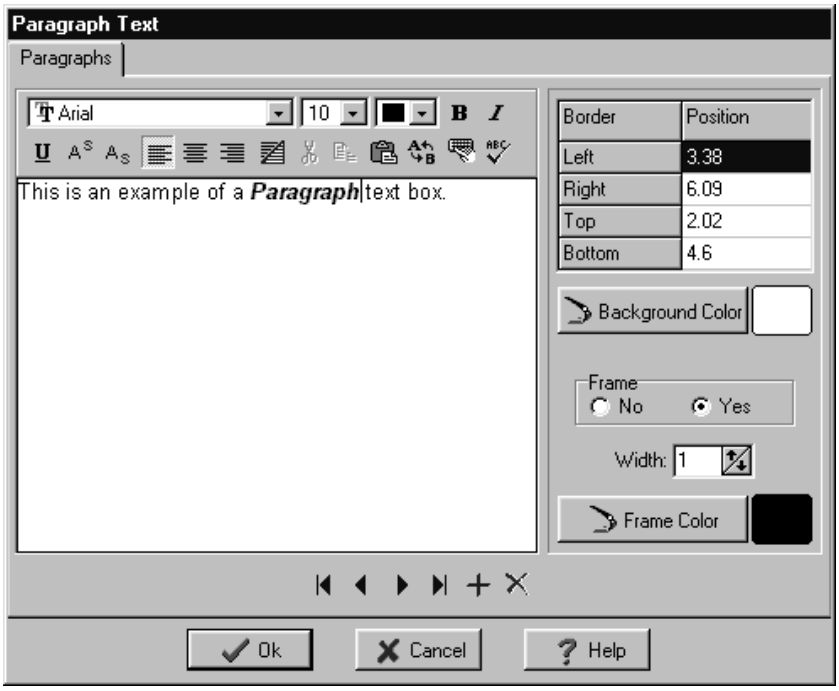
1. By clicking on the Paragraph button on the Toolbar. Next using the left mouse button click on the location of the upper left corner of the paragraph text box. Then while holding the left mouse button down drag the mouse to the location of the lower right corner. Then release the mouse button. While the mouse button is held down a marquee box will be drawn to indicate the location of the paragraph box. After the button has been released, the Paragraph Text form shown in the section below will be displayed.

2. By selecting the Paragraph Text menu item from the Edit menu or Popup menu and then clicking on the Add button on the Paragraph Text form. This will create a new paragraph. Using this method, the location of the paragraph must be specified on the form as described below.

Editing a Paragraph

Existing Paragraph data can be edited by selecting the Paragraph Text menu item of the Edit menu or clicking the left mouse button inside the Paragraph Text of the template.

After performing one of the above tasks, the Paragraph Text form below will be displayed.



If the template has two pages, the Paragraph Text form will have two tabs as shown below. The first tab is for paragraphs on the first page and the second tab is for paragraphs on the second page. The data entry for both tabs is identical.

The following information can be entered and edited using this form:

Text: This is the text for the paragraph. There is no limit to the length of the text. The Rich Text toolbar at the top of the form is used to format the text. This toolbar is described below.

Left: This is the position of the left border of the paragraph in inches or millimeters from the left side of the page. If the Paragraph button on the toolbar is used to create the paragraph, this position will be filled in by the program. The units of measurement are specified in the page layout.

Right: This is the position of the right border of the paragraph in inches or millimeters from the left side of the page. If the Paragraph button on the toolbar is used to create the paragraph, this position will be filled in by the program.

Top: This is the position of the top border of the paragraph in inches or millimeters from the top of the page. If the Paragraph button on the toolbar is used to create the paragraph, this position will be filled in by the program.

Bottom: This is the position of the bottom border of the paragraph in inches or millimeters from the top of the page. If the Paragraph button on the toolbar is used to create the paragraph, this position will be filled in by the program.

Background Color: This is the background color of the paragraph text box. When the Background Color button is pressed, a Color form is displayed. Using this form, a basic color can be selected or a custom color can be specified.

Frame: Select yes to display a frame around the paragraph text.

Frame Width: This is the line width of the frame around the paragraph text. If no frame is selected above, this field will not be displayed.

Frame Color: This is the color of the frame to display around the paragraph text. When the Frame Color button is pressed a Color form is displayed. Using this form, a basic color can be selected or a custom color can be specified. If no frame is selected above, this field will not be displayed.

Sizing a Paragraph

The size of the paragraph can be changed using the Paragraph Text form above or the mouse. To adjust the size using the mouse, follow the procedure below.

1. Position the cursor at the boundary of the paragraph. The cursor should change to a set of arrows and the Status line should display ?Edit Size of Paragraph." The orientation of the arrows will indicate the direction that the boundary can be changed.

2. Press and hold the left mouse button down, and drag the boundary to its new position.

3. While dragging the boundary, a rectangle will be displayed showing its current location.

4. When the boundary is in the desired location, release the left mouse button.

Bitmaps

Tip

If your bitmaps are not in Windows BMP format, there are plenty of free programs that can be used to convert them. Check GAEA's web site for links to them.

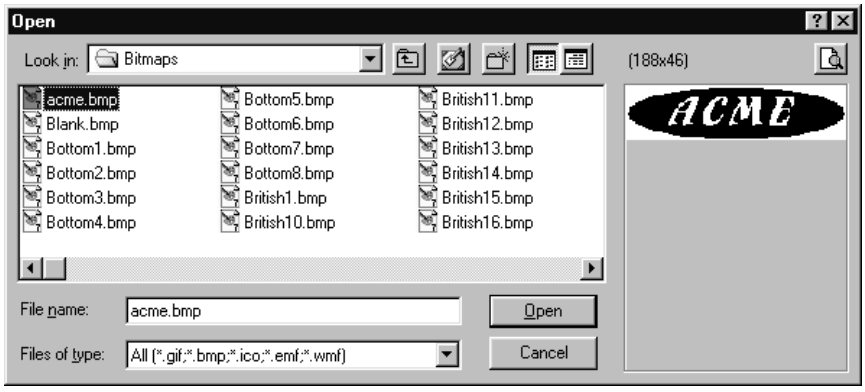
Bitmaps contained in Windows bitmap (BMP) files can be added anywhere on a template. These bitmaps can be used to show company logos, site plans, legends, and other graphical information. Bitmaps are displayed over top of any information on the template. There is no limit to the number of bitmaps that can be displayed.

Adding a Bitmap

There are two methods that can be used to add a bitmap to a template:

1. By clicking on the Bitmap button on the Toolbar. Next using the left mouse button click on the location of the center of the bitmap. The Open form below will then be displayed. Select the bitmap file and then press the Open button.

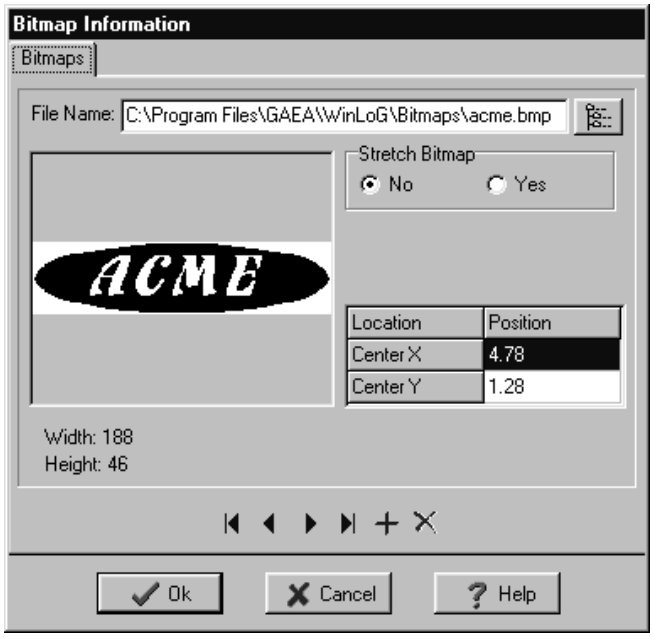
2. By selecting the Bitmaps menu item from the Edit menu or Popup menu and then clicking on the Add button on the form. The Open form below will then be displayed. Select the bitmap file and then press the Open button. Using this method, the location of the bitmap must be specified on the form as described below.



Editing a Bitmap

Existing Bitmaps can be edited by selecting the Bitmaps menu item of the Edit menu or clicking the left mouse button inside the Bitmap of the template. After performing one of the above tasks, the Bitmap Information form below will be displayed.

If the template has two pages, the Bitmap form will have two tabs as shown below. The first tab is for bitmaps on the first page and the second tab is for bitmaps on the second page. The data entry for both tabs is identical.



The following information can be entered and edited using this form:

File Name: This is the name of the bitmap file to display on the template. To change the name of the file, edit this name or click on the button to the right of the name. If the button to the right is pressed, an Open bitmap file form will be displayed.

Stretch Bitmap: Select yes to stretch the bitmap to fit within the specified borders. If no is selected, only the center of the bitmap and page can be entered for the position. If the Bitmap button on the toolbar is used to add the bitmap, Stretch Bitmap is set to No.

Maintain Aspect Ratio: Select yes to keep the aspect ratio of the bitmap the same as stored in the file. If yes is selected the bottom of the bitmap will be automatically adjusted to maintain the aspect ratio. If Stretch Bitmap is set to No, then this field will not be displayed and it is assumed that the aspect ratio is maintained.

Left: This is the position of the left border of the bitmap in inches or millimeters from the left side of the page. If the Bitmap button on the toolbar is used to create the bitmap, this field will not be displayed. If Stretch Bitmap is set to No then this field will not be displayed. The units of measurement are specified in the page layout.

Right: This is the position of the right border of the bitmap in inches or millimeters from the left side of the page. If the Bitmap button on the toolbar is used to create the bitmap, this field will not be displayed. If Stretch Bitmap is set to No then this field will not be displayed.

Top: This is the position of the top border of the bitmap in inches or millimeters from the top of the page. If the Bitmap button on the toolbar is used to create the bitmap, this field will not be displayed. If Stretch Bitmap is set to No, then this field will not be displayed.

Bottom: This is the position of the bottom border of the bitmap in inches or millimeters from the top of the page. If the Stretch Bitmap is set to No or Maintain Aspect Ratio is set to yes, then this field will not be displayed and the bottom will be calculated by the program.

Center X: This is the bitmap's horizontal center in inches or millimeters from the left side of the page. If Stretch Bitmap is set to Yes, this field will not be displayed. If the Bitmap button on the toolbar is used to add the bitmap, this field will be filled in by the program.

Center Y: This is the bitmap's vertical center in inches or millimeters from the left side of the page. If Stretch Bitmap is set to Yes, this field will not be displayed. If the Bitmap button on the toolbar is used to add the bitmap, this field will be filled in by the program.

Sizing a Bitmap

The size of the bitmap can be changed using the Bitmap Information form above or the mouse. To adjust the size using the mouse, follow the procedure below.

1. Position the cursor at the boundary of the bitmap. The cursor should change to a set of arrows and the Status line should display “Edit Size of Bitmap." The orientation of the arrows will indicate the direction that the boundary can be changed.

2. Press and hold the left mouse button down, and drag the boundary to its new position.

3. While dragging the boundary, a rectangle will be displayed showing its current location.

4. When the boundary is in the desired location, release the left mouse button.

Lines and Arrows

Horizontal, vertical, and diagonal lines and arrows can be added anywhere on a template. There is no limit to the number of lines and arrows that can be added.

Adding a Line or an Arrow

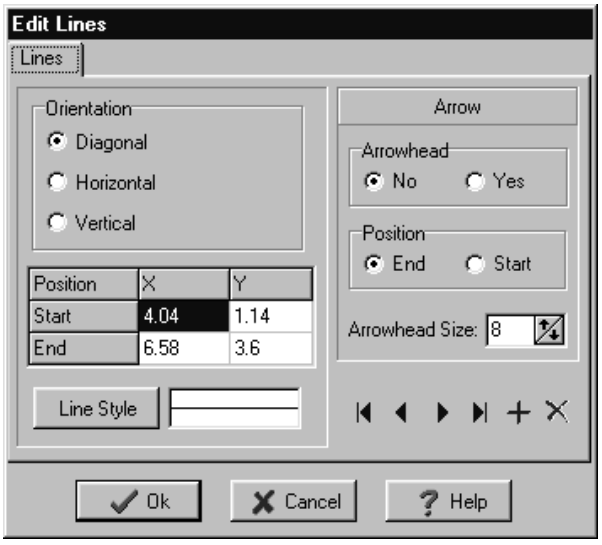
There are two methods that can be used to add a line or arrow to a template:

1. By clicking on the Line button on the Toolbar. Next using the left mouse button click on the location of the starting point of the line or arrow. Then while holding down the left mouse button, drag the cursor to the end of the line or arrow and release the mouse button. The Edit Lines form described in the next section will then be displayed.

2. By selecting the Lines menu item from the Edit menu or Popup menu and then clicking on the Add button on the form. The Edit Lines form described in the next section will then be displayed. Using this method, the location of the line must be specified on the form.

Editing a Line or Arrow

Existing Lines can be edited by selecting the Lines menu item of the Edit menu or clicking the left mouse button at the start or end point of the line. After performing one of the above tasks, the Edit Lines form below will be displayed.



If the template has two pages, the Edit Lines form will have two tabs as shown on the next page. The first tab is for lines on the first page and the second tab is for lines on the second page. The data entry for both tabs is identical.

The following information can be entered and edited using this form:

Orientation: This is the orientation of the line, either diagonal, horizontal, or vertical. If the orientation is set to horizontal, the vertical position will be set to the y position of the start of the line. If the orientation is set to vertical, the horizontal position will be set to the x position of the start of the line.

Start X: This is the horizontal position of the start of the line in inches or millimeters from the left side of the page. If the Line button on the toolbar is used to create the line, the program will fill in this field. The units of measurement are specified in the page layout.

Start Y: This is the vertical position of the start of the line in inches or millimeters from the top of the page. If the Line button on the toolbar is used to create the line, the program will fill in this field.

End X: This is the horizontal position of the end of the line in inches or millimeters from the left side of the page. If the Line button on the toolbar is used to create the line, this field will be filled in by the program.

End Y: This is the vertical position of the end of the line in inches or millimeters from the top of the page. If the Line button on the toolbar is used to create the line, this field will be filled in by the program.

Line Style: This is the style of the line. The line style can be changed by pressing the Line Style button. A Line Properties form will then be displayed. Using this form the style, color, and width of the line can be set.

Arrowhead: To display an arrowhead at the start or end of the line select yes.

Arrow Position: This is position to place the arrowhead, either at the start or end of the line. If no arrowhead is selected above, this field will not appear.

Arrowhead Size: This is the size of the arrowhead. If no arrowhead is selected above, this field will not appear.

Rectangles

Rectangles can be added anywhere on a template. There is no limit to the number of rectangles that can be added.

Adding a Rectangle

There are two methods that can be used to add a rectangle to a template:

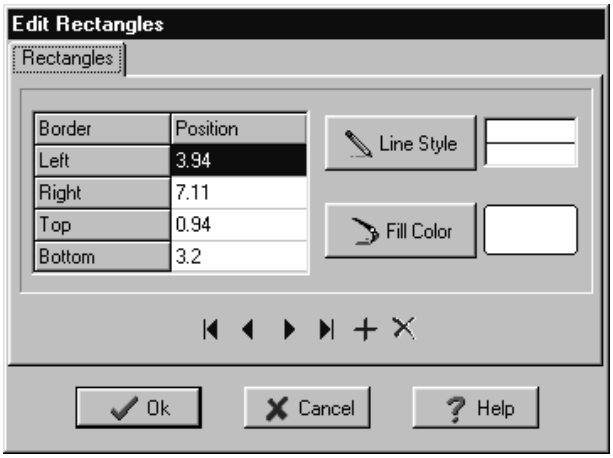
1. By clicking on the Rectangle button on the Toolbar. Next using the left mouse button click on the location of the upper left corner of the rectangle. Then while holding down the left mouse button, drag the cursor to the lower right corner of the rectangle and release the mouse button. The Edit Rectangle form described in the next section will then be displayed.

2. By selecting the Rectangles menu item from the Edit menu or Popup menu and then clicking on the Add button on the form. The Edit Rectangles form described in the next section will then be displayed. Using this method, the location of the rectangle must be specified on the form.

Editing a Rectangle

Existing rectangles can be edited by selecting the Rectangles menu item of the Edit menu or clicking the left mouse button inside the rectangle on the template. After performing one of the above tasks, the Edit Rectangle form on the next page will be displayed.

If the template has two pages, the Edit Rectangles form will have two tabs as shown below. The first tab is for rectangles on the first page and the second tab is for rectangles on the second page. The data entry for both tabs is identical.



The following information can be entered and edited using this form:

Left: This is the position of the left border of the rectangle in inches or millimeters from the left side of the page. If the Rectangle button on the toolbar is used to create the rectangle, the program will fill in this position. The units of measurement are specified in the page layout.

Right: This is the position of the right border of the rectangle in inches or millimeters from the left side of the page. If the Rectangle button on the toolbar is used to create the rectangle, this position will be filled in by the program.

Top: This is the position of the top border of the rectangle in inches or millimeters from the top of the page. If the Rectangle button on the toolbar is used to create the rectangle, this position will be filled in by the program.

Bottom: This is the position of the bottom border of the rectangle in inches or millimeters from the top of the page. If the Rectangle button on the toolbar is used to create the rectangle, this position will be filled in by the program.

Line Style: This is the style of the rectangle border. The line style can be changed by pressing the Line Style button. A Line Properties form will then be displayed. Using this form the style, color, and width of the rectangle can be set.

Fill Color: This is the color to use to fill the inside of the rectangle. When the Fill Color button is pressed, a Color form will be displayed. Using this form, a basic color can be selected or a custom color can be specified.

Tables

Floating tables can be added anywhere on a template. These tables are displayed over top of any information on the template. There is no limit to the number of tables that can be displayed. These boxes can overlap boundaries between the header, footer, and columns. Template tables are typically used to group of data with similar values such as a water level table.

Adding a Table

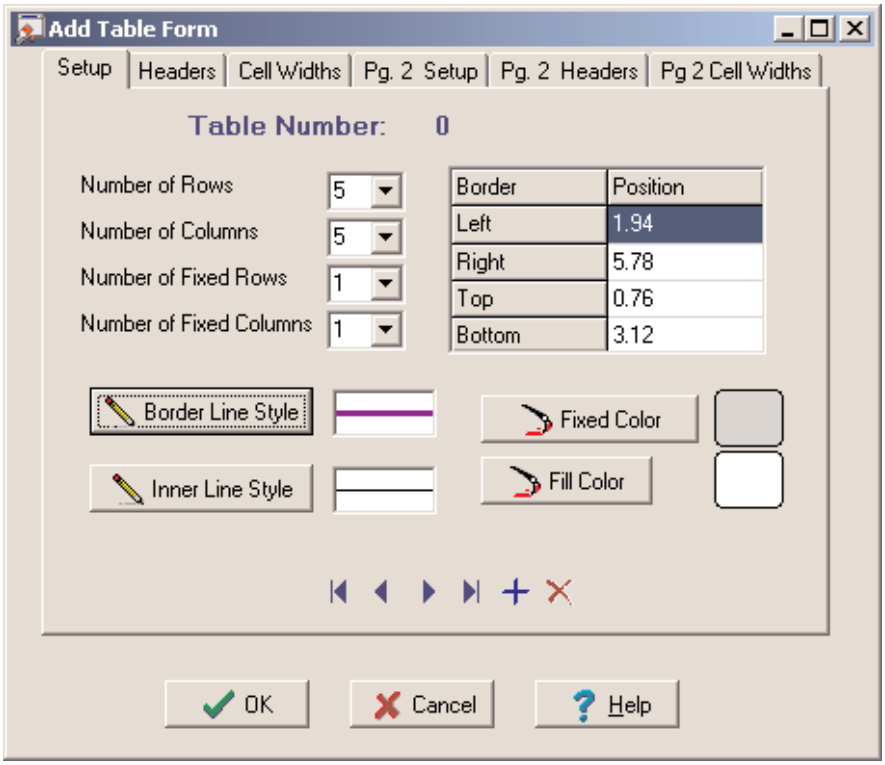
There are two methods that can be used to add a Table to a template:

1. By clicking on the Table button on the Toolbar. Next using the left mouse button click on the location of the upper left corner of the Table box. Then while holding the left mouse button down drag the mouse to the location of the lower right corner. Then release the mouse button. While the mouse button is held down a marquee box will be drawn to indicate the location of the Table. After the button has been released, the Table form shown in the section below will be displayed.

2. By selecting the Tables menu item from the Edit menu or Popup menu and then clicking on the Add button on the Tables form. This will create a new Table. Using this method, the location of the Table must be specified on the form as described below.

Editing a Table

Existing tables in a template can be edited by selecting the Table menu item of the Edit menu or clicking the left mouse button inside the Table on the template. After performing one of the above tasks, the Template Table form on the next page will be displayed.



If the template has two pages, the Table form will have 6 tabs as shown below. The first three tabs are for tables on the first page and the second three tabs are for tables on the second page. The data entry for both sets of tabs is identical.

Setup Tab(or Pg. 2 Setup Tab)

The following information can be entered and edited using the Setup tab shown above:

Number of Rows: The number of rows in the table.

Number of Columns: The number of columns in the table.

Number of Fixed Rows: The number of fixed rows in the table. Fixed rows contain information that can only be entered/edited from the template. Usually information such as titles for tables is entered from the template

Number of Fixed Cols: The number of fixed columns in the table. Fixed columns contain information that can only be edited or entered from the template. Usually information such as titles for tables is entered from the template.

Left: This is the position of the left border of the table in inches or millimeters from the left side of the page. The units of measurement are specified in the page layout.

Right: This is the position of the right border of the table in inches or millimeters from the left side of the page. The units of measurement are specified in the page layout.

Top: This is the position of the top border of the table in inches or millimeters from the top of the page. The units of measurement are specified in the page layout.

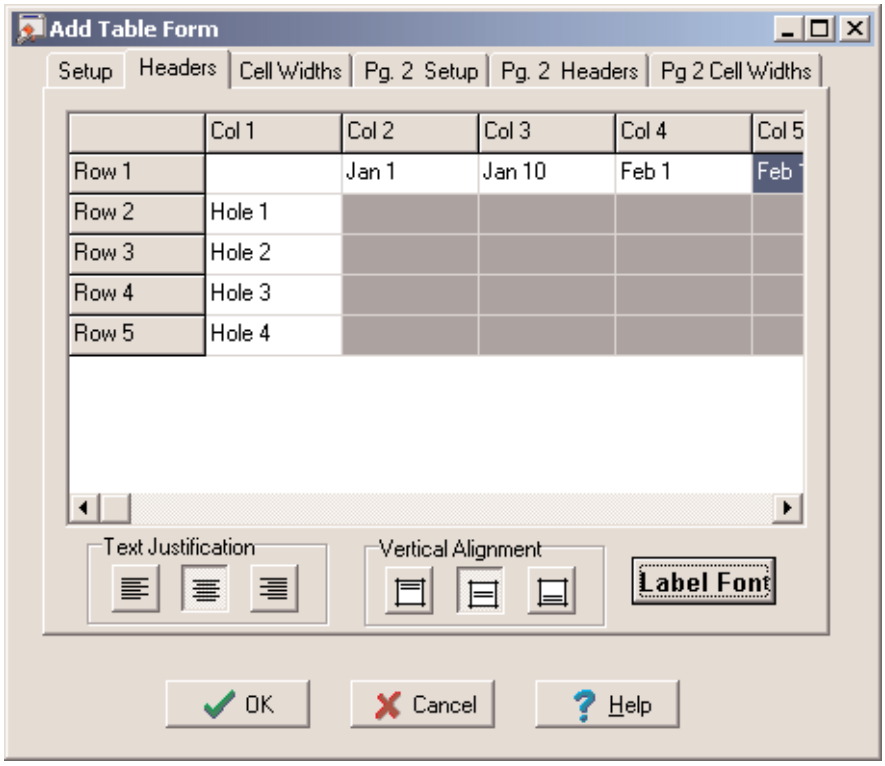
Bottom: This is the position of the bottom border of the table in inches or millimeters from the top of the page. The units of measurement are specified in the page layout.

Border Line Style: This is the line style of the outside border of the template table. It includes the lines thickness and style (Solid, Dash Dot, etc.)

Inner Line Style: This is the line style of the lines between the individual cells of a template table. It includes the lines thickness and style(Solid, Dash Dot, etc.)

Fixed Color: This is the background colour of the fixed columns of the table.When the button is pressed a Color form will be displayed.

Fill Color: This is the background colour of the non-fixed columns of the table.When the button is pressed a Color form will be displayed.



Headers Tab(or Pg. 2 Headers Tab)

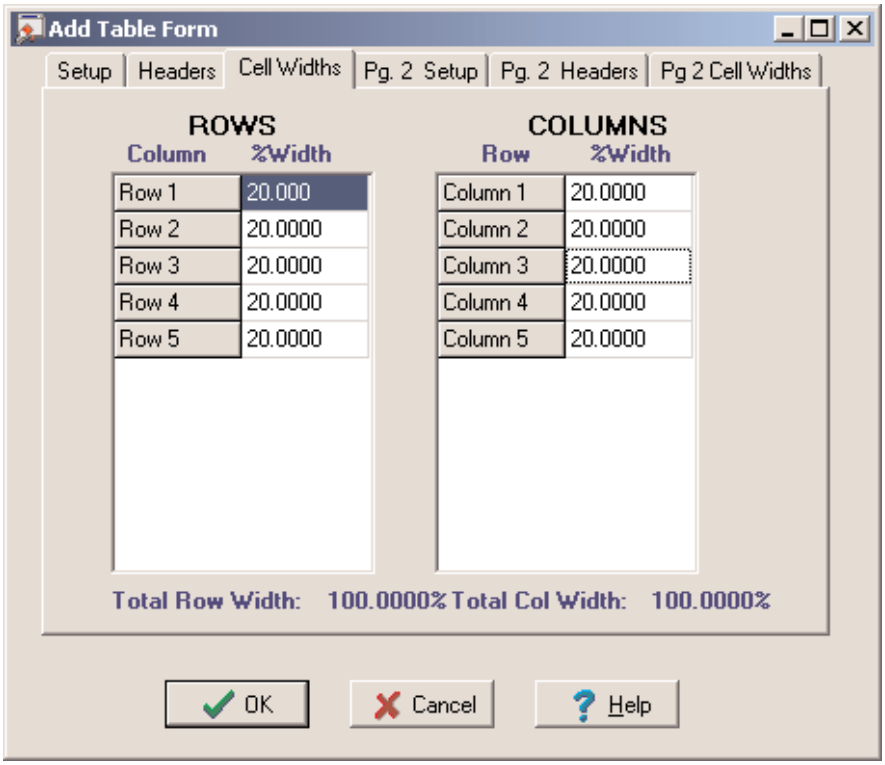
The following information can be entered and edited using the Headers tab shown above:

Table Headers: Headers can be entered for each fixed column and row in the table. In this example, there is one fixed column and one fixed row, thus we can enter the headers for the 5 columns and 5 rows as shown to the Right.

Text Justification: The text in the table can be justified left, center, or right.

Vertical Alignment: The vertical alignment of the table text can be top, center, or bottom.

Label Font: The Label Font button lets the user set the font type of the column and row headers.



Cell Widths Tab(or Pg. 2 Cell Widths Tab)

The following information can be entered and edited using this tab shown above:

Column Widths: Column width is the width of a individual column as a percentage of the total table width. The value should add up to 100%

Row Widths: Row width is the width of a individual row as a percentage of the total table height. The value should add up to 100%

Sizing a Table

The size of the table can be changed using the Edit Table form above or by using the mouse. To adjust the size using the mouse, follow the procedure below.

1. Position the cursor at the boundary of the Table. The cursor should change to a set of arrows and the Status line should display “Edit Size of Table" The orientation of the arrows will indicate the direction that the boundary can be changed.
2. Press and hold the left mouse button down, and drag the boundary to its new position.
3. While dragging the boundary, a rectangle will be displayed showing its current location.
4. When the boundary is in the desired location, release the left mouse button.

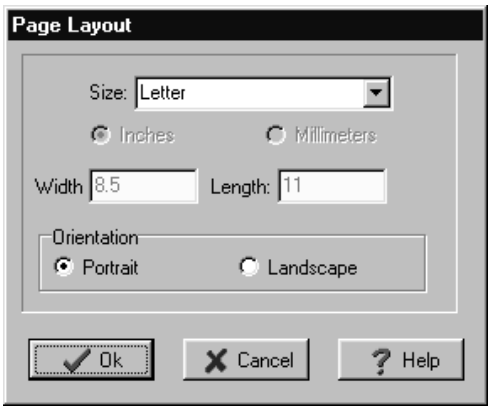
Moving a Table

The position of the table can be changed using the Edit Table form above or by using the mouse. To adjust the size using the mouse, follow the procedure below.

1. Position the cursor at the center of the Table. The cursor should change to an arrow with a box and the Status line should display “Move Table".
2. Press and hold the left mouse button down, and drag the boundary to its new position.
3. While dragging the boundary, a rectangle will be displayed showing its current location.
4. When the boundary is in the desired location, release the left mouse button.

Page Layout

The page layout is used to set the paper size and orientation for the printed borehole log. To change the page layout, select the Page Layout menu item from the Edit menu. The Page Layout form below will be displayed.



The following information can be entered on the Page Layout form:

Size: This is the page size of the template. When the arrow at the right is pressed, a list of available page sizes is displayed.

Inches or Millimeters: The units for the width and length of the page. These units will be used when specifying the layout of the legend. If the Page Size is "Custom", the units can be set to either inches or millimeters.

Width: If the page size is specified as "custom", the page horizontal width in inches must be specified.

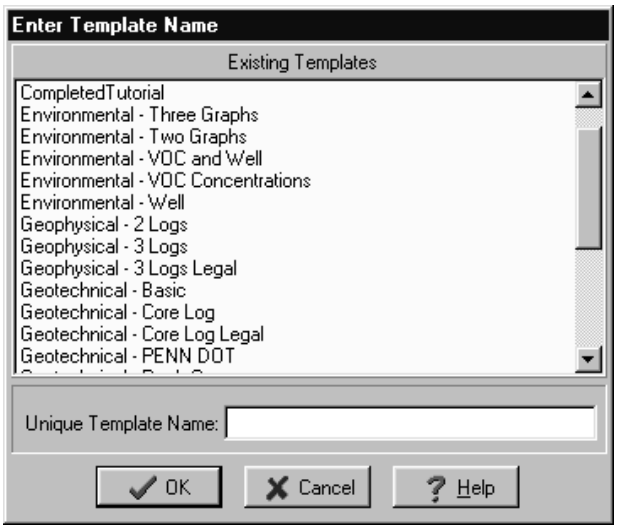
Length: If the page size is specified as "custom", the page vertical length in inches must be specified.

Orientation: This is the orientation of the page; either portrait (longer side is vertical) or landscape (longer side is horizontal).

Saving a Template

To save a template after it has been edited, either select the Save Template menu item of the Templates submenu of the File menu or press the Save button on the template toolbar.

To save the template under a different template name, press the SaveAs button on the template toolbar. The Enter Template Name form shown below will be displayed. Enter a unique template name and then press the Ok button.



Deleting a Template

To delete a template log select the Delete Template menu item from the Templates submenu of the File Menu. The Delete Templates form will be displayed.A single template can be selected by clicking on it and pressing the Open button. A range of templates can be selected by clicking on the beginning of the range, and then holding down the Shift key while clicking on the end of the range. Multiple templates can be selected, by holding down the CTRL key while clicking on the templates.

Creating the Second Template Page

The optional second page of the template can be used to display a different log format for the second and subsequent pages of the borehole log. This technique is often used to display a first page with a large header or footer (with a large number of header/footer text lines), and second and subsequent pages with a smaller header or footer (with less header/footer text lines).

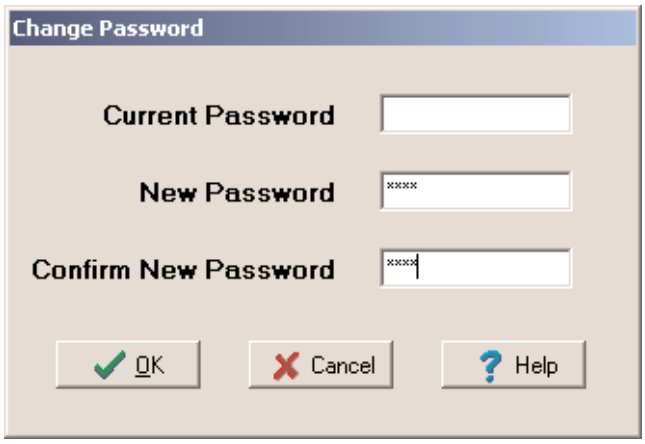
To create the second template page, select the 2 Pages menu item from the # of Pages submenu of the Edit menu. A second template page will then be created that is identical to the first page (the first page is used as a default format to save time creating the second page). This page can be modified as required and then saved.

To revert to a one page template, select the 1 Page menu item from the # of Pages submenu of the Edit menu. Care should be taken when reverting back to one page, since any editing of the second page will be lost.

Setting a Password for the Template

It maybe advantageous for some companies to create templates that have a password associated with them. In this way accidental editing of templates could be avoided since only employees knowing the password to the template would be able to edit it.

This type of template password locking is accomplished by selecting the Change Template Password menu item from the Templates submenu of the File menu. The Change Password form on the next page will be displayed.



There are three editable fields on this form. These include:

Current Password: The current password of the template. If the template doesn't currently have a password then leave this blank.

New Password: The new password of the template. If you want to remove the old password then set this to blank.

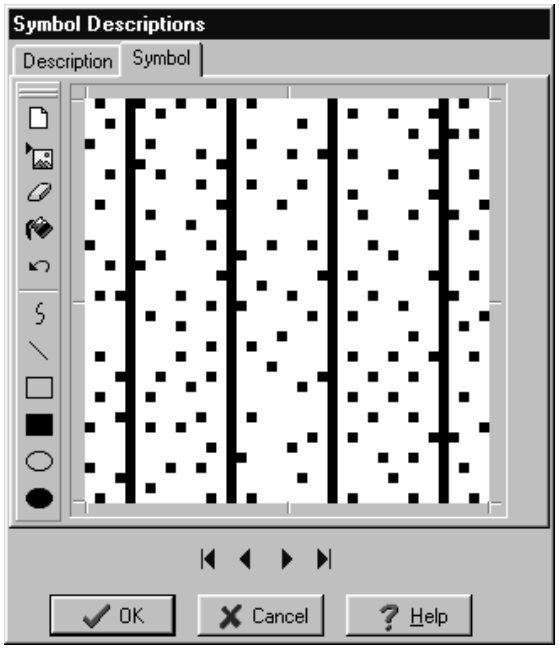
Confirm New Password: The new password again of the template. If you want to remove the old password then set this to blank.

Opening a Password Locked Template

To open a template that has been password locked simply follow the same procedure as a user would normally follow to open a Template. Right click File**,** then Templates**,** then Open Template or use the Template Toolbar to open the template. This will open up the Password **f**orm on the next page if the template is password locked, otherwise the template will open normally.

If the template is password locked, enter the password and click OK. If the user enters the correct password they will be permitted to edit the template otherwise the user is permitted to open the template with read only access.

6. Legends



6. Legends

Legends are used to provide descriptions for the lithologic symbols, well components, and sample symbols shown in borehole logs. WinLoG comes with several previously defined legends. In addition, any number of new legends can be easily created.

Legends can be customized to display different lithologic symbol libraries, well component symbols, and sample symbols. In addition, they can include bitmaps, and paragraph text. A company logo and/or site map, stored as bitmaps, can also be included in a legend.

Although you can use an unlimited number of lithologic libraries (each with 18 symbols), only one library can be represented on the legend. If you need to show more libraries, it is recommended to create additional legends. If more symbols are specified then can be fit on the page, they will be truncated at the bottom of the page.

Each symbol also has a default symbol description stored in the library, which is used when creating legends. When a legend is created the default description will be used for the symbol description in the legend. If this description is then edited in the legend, the new description will only appear in that legend. The new description in the legend will not replace the default description in the library. To change the default description in the library, the description must be changed in the library as discussed in the next chapter. However, the actual symbols are the same in the legend as in the library and if edited in the legend the symbols in the library will change as well.

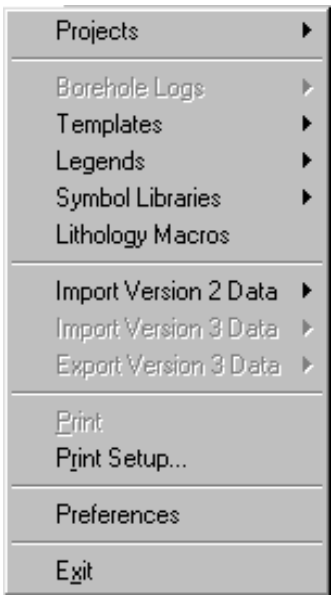
Legends are stored in the WinLoG master database. The format of the master database is Microsoft Access 97. This database is stored in the Main Database Directory. For a detailed discussion of the database structure, see Database Structure in the Introduction Chapter or Appendix B.

This chapter describes how to:

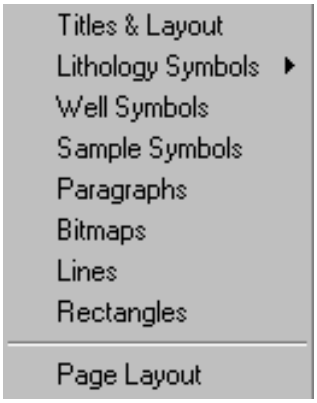
1. Create a new legend
2. Enter and edit the following information:
   - Titles and Layout
   - Lithology Symbols
   - Well Symbols
   - Sample Symbols
   - Paragraph text
   - Bitmaps
   - Lines and arrows
   - Rectangles
   - Page Layout
3. Save a legend
4. Delete a legend
5. Print a legend

These tasks can be performed using menu commands on the File menu and Edit menus or speed buttons on the Legend toolbar, shown below.

File Menu



Edit Menu



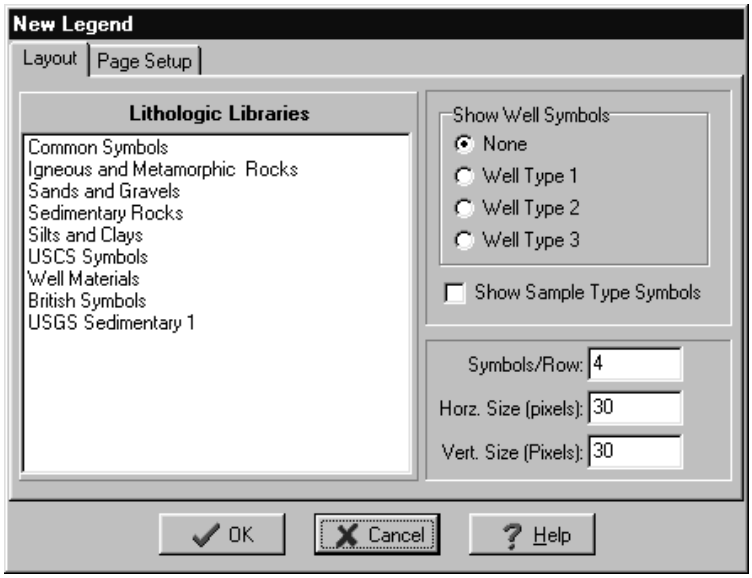
Legend Toolbar

Creating a New Legend

Since legends are stored in the WinLoG master database, they can be created and edited at any time (no project has to be open). To create a legend either select the New Legend menu item of the Legends sub menu of the File menu or click the New button on the Legend Toolbar.

After one of the above tasks is performed, the New Legend form above will be displayed. This form has two tabs, one for the layout of the legend and one for the page setup.

Layout Tab



The following information can be entered on the Layout tab:

Lithologic Libraries: The current lithologic libraries are displayed in a list. To include a lithologic library in the legend, select it from the list.

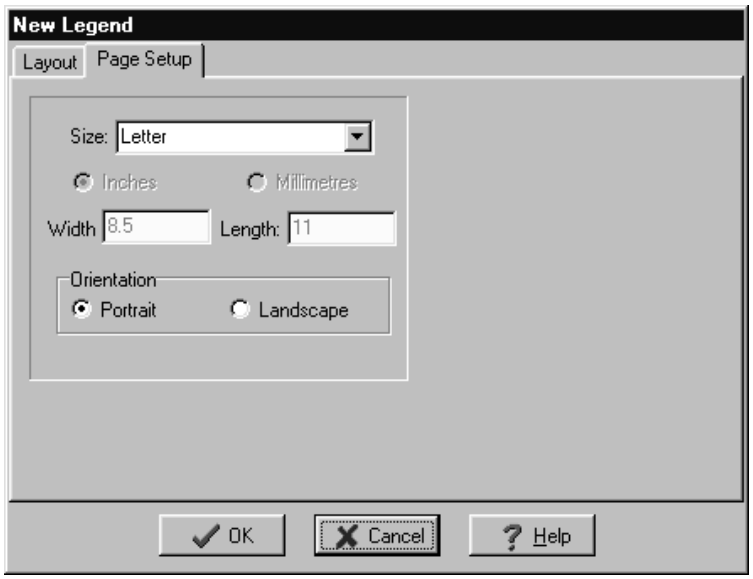
Show Well Symbols: Select whether to show well symbols in the legend. Choose none, Well Type 1, Well Type 2, or Well Type 3.

Show Sample Symbols: Check to show sample symbols in the legend.

Symbols/Row: This is the default number of symbols to draw per row. The number can be changed later in the layout.

Horizontal Pixel Size: This is the width to use when drawing the symbols.

Vertical Pixel Size: This is the height to use when drawing the symbols.



Page Setup Tab

The following information can be entered on the Page Setup tab shown above:

Size: This is the page size of the template. When the arrow at the right is pressed, a list of available page sizes is displayed.

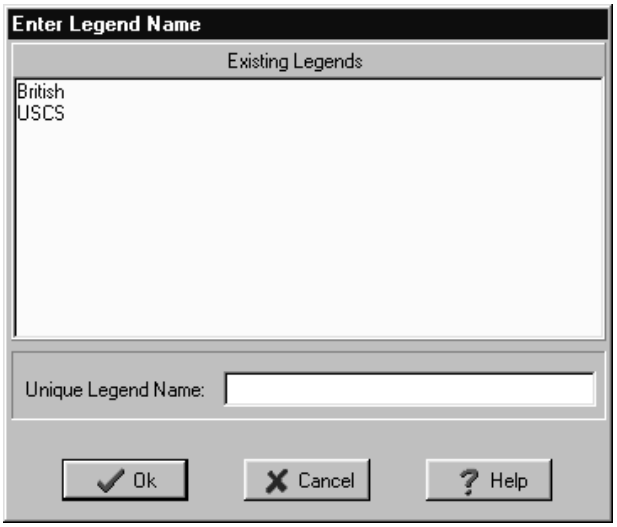
Inches or Millimeters: The units for the width and length of the page. These units will be used when specifying the layout of the legend. If the Page Size is "Custom", the units can be set to either inches or millimeters.

Custom Width: If the page size is specified as "custom", the page horizontal width in inches must be specified.

Custom Length: If the page size is specified as "custom", the page vertical length in inches must be specified.

Orientation: This is the orientation of the page; either portrait (longer side is vertical) or landscape (longer side is horizontal).

After the Ok button is pressed on the New Legend form, the Enter Legend Name form below will be displayed. Enter a unique name for the new legend and press Ok.



Editing a Legend

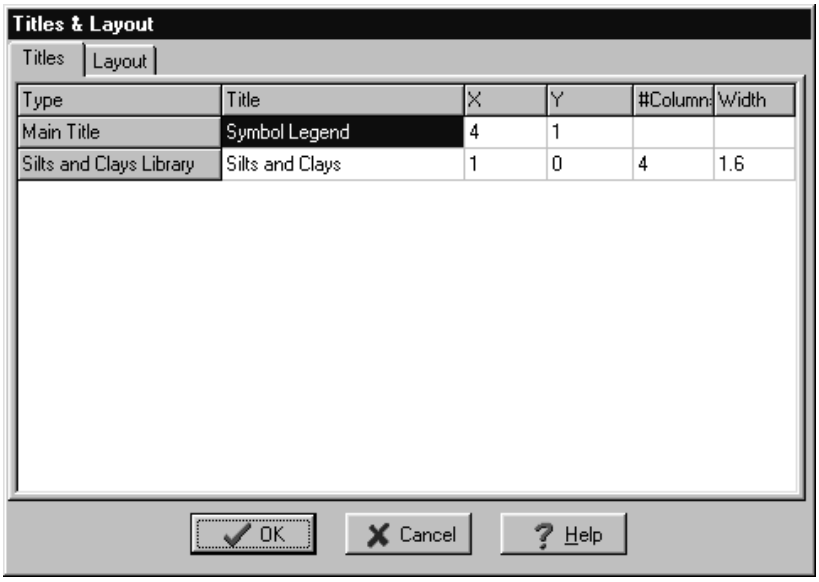
To enter or edit data in a legend, the legend must first be created as described above or an existing legend opened. Existing legends can be opened for editing by selecting the Open Legend menu item of the Legends sub menu of the File menu or clicking the Open button on the Legend Toolbar.

After the legend has been opened and displayed, the legend can be entered and edited as described in the sections below.

Titles and Layout

The titles in the legend and page layout can be changed by selecting the Titles menu item from the Edit menu or click the left mouse button on one of the titles in the legend.

Titles Tab



The Titles tab shown above is used to enter and edit the following information for each type of title:

Title: This is the title to display for this type of symbol (up to 255 characters). The types of titles will depend upon what symbols are displayed in the legend.

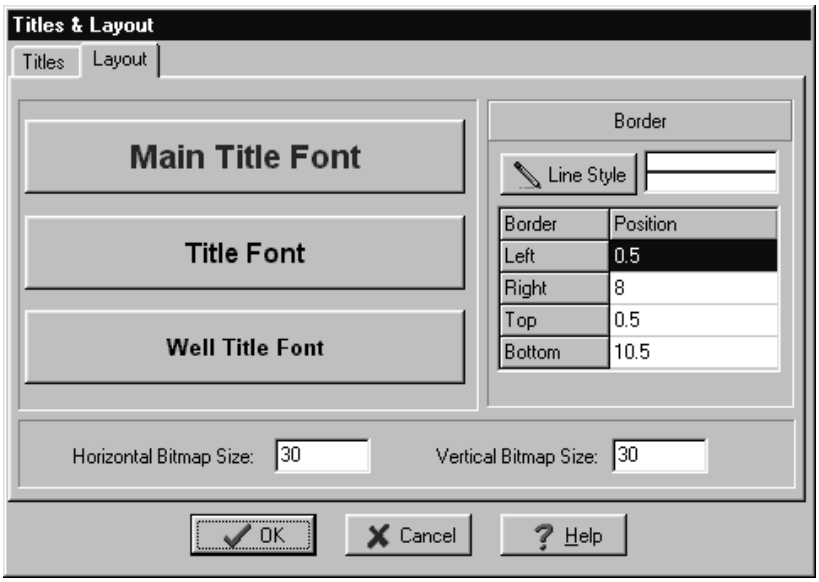
X: This is the horizontal position to place the title and symbols, in inches or millimeters from the left side of the page. The symbols associated with this title will be drawn beginning at this position. By adjusting the horizontal position, more than one set of symbols can be drawn across the page.The units of measurement are specified in the page layout.

Y: This is the vertical position to place the title and symbols, in inches or millimeters from the top of the page. The symbols associated with this title will be drawn below the title. If Y is set to zero, the program will calculate the position.

 # Columns: This is the number of symbols per row to draw for this type of symbol. The number of columns can be different for each type. This field is not used for "Main Title" and "Well Symbols" types, since there are no symbols associated with these types.

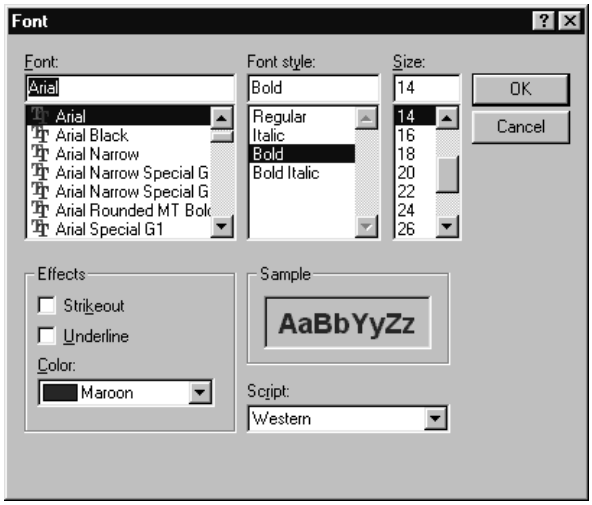
Width: This is the width of each column in inches. By adjusting the Width and X position, more than one set of symbols can be drawn across the page.

Layout Tab



Th layout tab shown above is used to enter and edit the following information for the legend:

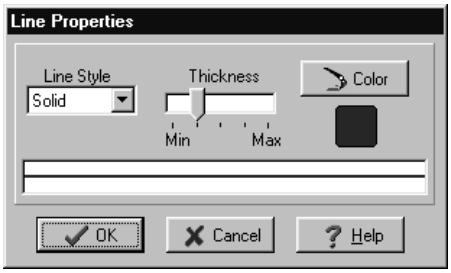
Main Title Font: This is the font to use for the main title of the legend. When the button is pressed, the Font form below is displayed. This form can be used to select the font name, style, size, and color.



Title Font: This is the font to use for the lithologic library title, well symbols title, and sample symbols title. When the button is pressed, the Font form shown on the previous page is displayed. This form can be used to select the font name, style, size, and color.

Well Title Font: This is the font to use for the sub-titles of the well symbols. For example, a Well Type 3 has the following sub-titles: Well Covers, Well Caps, Casings and Screens, Joints and Miscellaneous. When the button is pressed, the Font form shown on the previous page is displayed. This form can be used to select the font name, style, size, and color.

Line Style: This is the line style to use to draw the border around the legend. When the Line Style button is pressed, the Line Properties form shown below will be displayed. This form can be used to set the line style, width, and color.



Left Border: This is the position of the left side of the border in inches or millimeters from the left side of the page. The units of measurement are specified in the page layout.

Right Border: This is the position of the right side of the border in inches or millimeters from the left side of the page.

Top Border: This is the position of the top of the border in inches or millimeters from the top of the page.

Bottom Border: This is the position of the bottom of the border in inches or millimeters from the top of the page.

Horizontal Bitmap Size: This is the size, in pixels, to draw the bitmap on the legend. A size of 40 is recommended.

Vertical Bitmap Size: This is the size, in pixels, to draw the bitmap on the legend. A size of 40 is recommended.

Lithologic Symbols

Each legend can contain one lithologic symbol library. The library is selected when the legend is created. Lithologic symbols are used to represent soils, rocks, ice, and well packing material. Lithologic symbol libraries are created and edited using the Symbol Libraries submenu and are discussed in detail in Chapter 7.

The lithologic symbols and descriptions in the legend can be changed by selecting the lithologic library from the Lithologic Symbols submenu of the Edit menu or click the left mouse button on one of the lithologic symbols in the legend.

After one of the above tasks has been performed, the Symbol Descriptions form will be displayed. This form has two tabs, one for the description and one for the symbol. This form is identical for lithologic symbols, well symbols, and sample symbols. The use of this form is described in the Symbol Descriptions section below.

Well Symbols

Each legend can contain well symbols for a Type 1, 2, or 3 well. The type of well symbols is selected when the legend is created. The number of symbols will depend upon the type of well.

1. For a Type 1 well there will be 12 symbols used to represent the various casings, screens, seals, and packing. All of the descriptions and symbols can be edited for this type of well.

2. For a Type 2 well there will be 8 symbols for Pipes & Screens, 8 symbols for Top Fittings, 8 symbols for Bottom Fittings, and 8 symbols for Packing. All of the descriptions can be edited for this type of well. However, only the Packing symbols can be edited, since the other symbols are drawn to scale by the program.

3. For a Type 3 well there will be 12 symbols for Well Covers, 12 symbols for Well Caps, 30 symbols for Casings & Screens, and 12 symbols for Joints & Miscellaneous. Lithologic libraries are used for the seal and packing symbols in this type of well. All of the descriptions can be edited for this type of well. However, none of the symbols can be edited, since they are all drawn to scale by the program.

The well symbols and descriptions in the legend can be changed by selecting the well symbol menu item from the Well Symbols submenu of the Edit menu or click the left mouse button on one of the well symbols in the legend. After one of the above tasks has been performed, the Symbol Descriptions form will be displayed. This form has two tabs, one for the description and one for the symbol. This form is identical for lithologic symbols, well symbols, and sample symbols. The use of this form is described in the Symbol Descriptions section below.

Sample Symbols

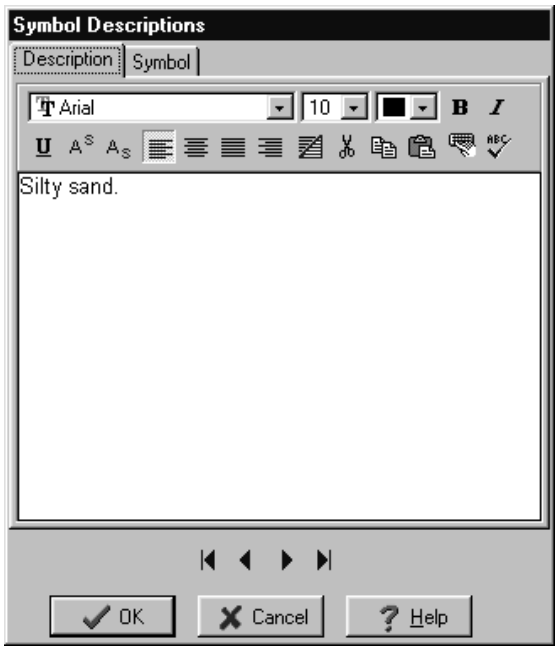
Symbols for the sample types can be displayed in the legend. This option is selected when the legend is created. There are 30 different sample symbols.

The sample symbols and descriptions in the legend can be changed by selecting the lithologic library from the Sample Symbols menu item of the Edit menu or click the left mouse button on one of the sample symbols in the legend. After one of the above tasks has been performed, the Symbol Descriptions form will be displayed. This form has two tabs, one for the description and one for the symbol. This form is identical for lithologic symbols, well symbols, and sample symbols. The use of this form is described in the Symbol Descriptions section below.

Symbol Descriptions

The method used to edit the descriptions and symbols is the same for lithologic symbols, well symbols, and sample symbols. Some types of symbols can not be edited; such as, certain well symbols. In this case, the symbol will be displayed but no editing allowed.

When one of the symbols is selected for editing the Symbol Descriptions form shown below will be displayed. This form has two tabs, one for the description and one for the symbol.



The buttons at the bottom of the form are used for the following:

The **Start** button displays the first symbol.

The **Previous** button displays the previous symbol.

The **Next** button displays the next symbol.

The **End** button displays the last symbol.

Description Tab

The Description tab, shown on the previous page is used to enter and edit the description for the symbol. There is no limit to the length of the description. At the top of the tab there is a Rich Text toolbar used to format the description, add symbols, and perform spell checking.

The use of the Rich Text toolbar is described below. Before selecting a speed button, the text to be modified should be selected with the mouse or the cursor should be placed at the desired insertion point.

The **Font Typeface** box is used to select the name of the font for the selected text.

The **Font Size** box is used to set the size of the font for the selected text.

The **Font Color** box is used to select the color of the font.

The **Bold** button is used to toggle the bold attribute of the selected text on and off.

The **Italics** button is used to toggle the italic attribute of the selected text on and off.

The **Underline** button is used to toggle the underline attribute of the selected text on and off.

The **Left** Justify button will left justify the selected text.

The **Center** Justify button will center justify the selected text.

The **Right** Justify button will right justify the selected text.

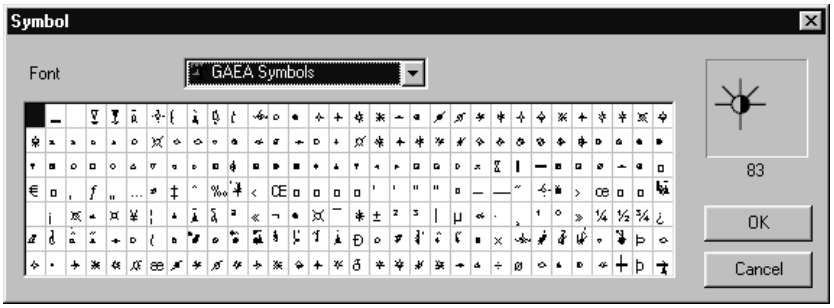
The **Select All** button will select all of the text in the company information.

The **Cut** button will remove the selected text and place it in the clipboard.

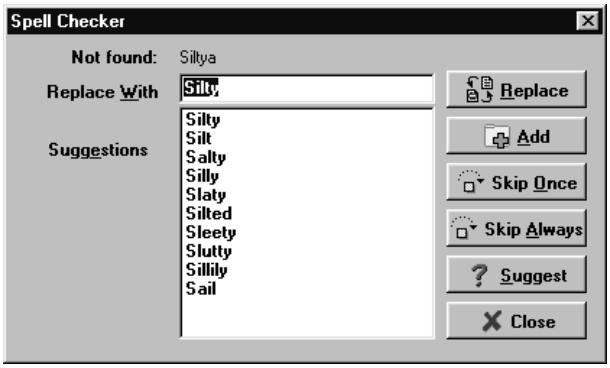
The **Copy** button will copy the selected text to the clipboard.

The **Paste** button will paste the text in the clipboard, at the current position of the cursor in the company information.

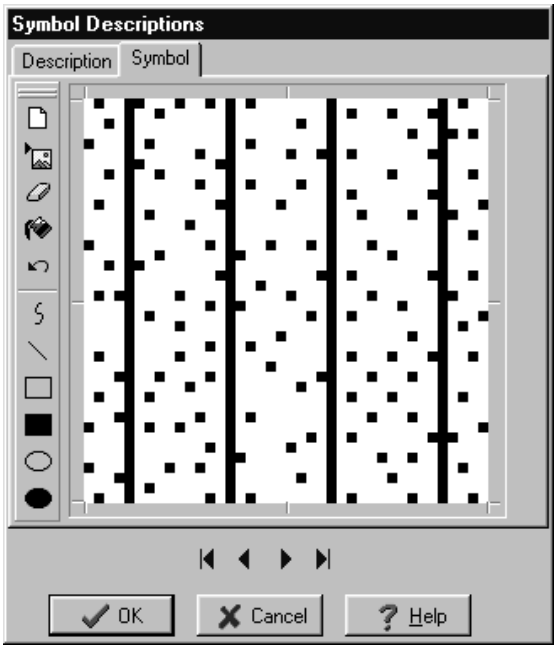
The **Symbol** button will display the Symbol form shown below. This form is used to place a symbol at the current cursor position in the memo field. To select a symbol use the Font box to select the font containing the symbol and then select the desired symbol. After the desired symbol has been selected, press the Ok button to insert it into the memo field. The WinLoG program comes with a font called "GAEA Symbols" that contains a variety of well and other symbols.



The Spell Check button will display the Spell Checker form shown on the next page and will check the spelling in the memo field. The dictionary used to check the spelling is set in the program Preferences (see Chapter 3). When the Add button is pressed the word will be appended to the custom dictionary.



Symbol Tab

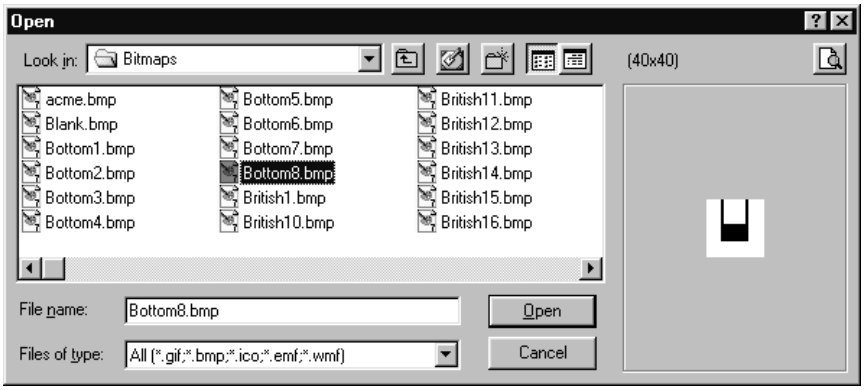


The Symbol tab, shown above, is used to edit the symbol. At the left side of the tab there is a toolbar used to edit the symbol. Some symbols, which are drawn to scale, can not be edited. If the symbol can not be edited the toolbar will be empty.

The buttons on the toolbar perform the following actions:

The **Clear** button is used to erase the current symbol and provide a blank page.

The **Import Picture** button is used to import a bitmap picture from a file into the current symbol. When this button is pressed, the Open bitmap form below will be displayed. Select the bitmap file to import and then press the Open button.



The **Erase** button is used to delete parts of the symbol. When this button is pressed the cursor will change to an eraser. To erase a part of the symbol, hold the left mouse button down and move the cursor over the area to be erased.

The **Fill** button is used to fill regions of symbols. When this button is pressed the cursor will change to a paint can. To fill an area click inside the region.

The **Undo** button is used to undo the previous edit operation.

The **Curve** button is used to draw a curved line on the symbol. When pressed the cursor will change to a pencil. To draw a curve, hold down the left mouse button and move the mouse. When finished drawing the line, release the mouse button.

The **Line** button is used to draw a straight line on the symbol. When pressed the cursor will change to a pencil. To draw a line, press and hold down the left mouse button at the start of the line. Move the mouse to the end of the line and release the mouse button.

The **Rectangle** button is used to draw a hollow rectangle on the symbol. When pressed the cursor will change to a cross. To draw a rectangle, press and hold down the left mouse button at the upper left corner of the rectangle. Move the mouse to the lower right corner of the rectangle and release the mouse button.

The **Filled Rectangle** button is used to draw a filled rectangle on the symbol. When pressed the cursor will change to a cross. To draw a rectangle, press and hold down the left mouse button at the upper left corner of the rectangle. Move the mouse to the lower right corner of the rectangle and release the mouse button.

The **Ellipse** button is used to draw a hollow ellipse on the symbol. When pressed the cursor will change to a cross. To draw an ellipse, press and hold down the left mouse button at the upper left corner of the ellipse. Move the mouse to the lower right corner of the ellipse and release the mouse button.

The **Filled Ellipse** button is used to draw a filled ellipse on the symbol. When pressed the cursor will change to a cross. To draw an ellipse, press and hold down the left mouse button at the upper left corner of the ellipse. Move the mouse to the lower right corner of the ellipse and release the mouse button.

Paragraphs

Floating paragraph text boxes can be added anywhere on a legend. These text boxes are displayed over top of any information on the legend. There is no limit to the number of paragraph text boxes that can be displayed. Paragraph text boxes are typically used to add comments to a legend.

Adding a Paragraph

There are two methods that can be used to add a Paragraph Text box to a legend:

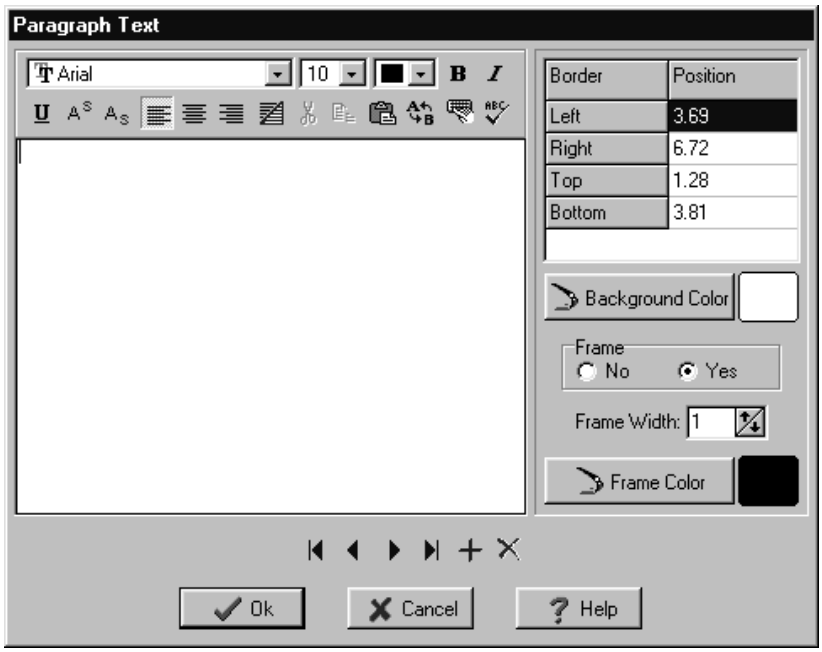
1. By clicking on the Paragraph button on the Toolbar. Next using the left mouse button click on the location of the upper left corner of the paragraph text box. Then while holding the left mouse button down drag the mouse to the location of the lower right corner, and then release the mouse button. While the mouse button is held down a marquee box will be drawn to indicate the location of the paragraph box. After the button has been released, the Paragraph Text form shown in the section below will be displayed.

2. By selecting the Paragraph Text menu item from the Edit menu or Popup menu and then clicking on the Add button on the Paragraph Text form. This will create a new paragraph. Using this method, the location of the paragraph must be specified on the form as described below.

Editing a Paragraph

Existing Paragraph data can be edited by selecting the Paragraph Text menu item of the Edit menu or clicking the left mouse button inside the Paragraph Text of the legend. After performing one of the above tasks, the Paragraph Text form on the next page will be displayed.

The buttons at the bottom of the this form are used for the following:



The **Start** button displays the first paragraph.

The **Previous** button displays the previous paragraph.

The **Next** button displays the next paragraph.

The **End** button displays the last paragraph.

The **Insert** button creates a new paragraph.

The **Delete** button deletes this paragraph.

The following information can be entered and edited using this form:

Text: This is the text for the paragraph. There is no limit to the length of the text. The Rich Text toolbar at the top of the form is used to format the text. This toolbar is described below.

Left: This is the position of the left border of the paragraph in inches or millimeters from the left side of the page. If the Paragraph button on the toolbar is used to create the paragraph, this position will be filled in by the program. The units of measurement are specified in the page layout.

Right: This is the position of the right border of the paragraph in inches or millimeters from the left side of the page. If the Paragraph button on the toolbar is used to create the paragraph, this position will be filled in by the program.

Top: This is the position of the top border of the paragraph in inches or millimeters from the top of the page. If the Paragraph button on the toolbar is used to create the paragraph, this position will be filled in by the program.

Bottom: This is the position of the bottom border of the paragraph in inches or millimeters from the top of the page. If the Paragraph button on the toolbar is used to create the paragraph, this position will be filled in by the program.

Background Color: This is the background color of the paragraph text box. When the Background Color button is pressed, a Color form is displayed. Using this form, a basic color can be selected or a custom color can be specified.

Frame: Select yes to display a frame around the paragraph text.

Frame Width: This is the line width of the frame around the paragraph text. If no frame is selected above, this field will not be displayed.

Frame Color: This is the color of the frame to display around the paragraph text. When the Frame Color button is pressed a Color form is displayed. Using this form, a basic color can be selected or a custom color can be specified. If no frame is selected above, this field will not be displayed.

At the top of the Paragraph Text form is the Rich Text toolbar, this toolbar can be used to modify the font characteristics of the text. Before selecting a speed button, the text to be modified should be selected with the mouse.

The speed buttons of the toolbar perform the following functions:

The **Font Typeface** box is used to select the name of the font to use for the selected text.

The **Font Size** box is used to set the size of the font for the selected text.

The **Font Color** box is used to select the color of the font for the selected text.

The **Bold** button is used to toggle the bold attribute of the selected text on and off.

The **Italics** button is used to toggle the italic attribute of the selected text on and off.

The **Underline** button is used to toggle the underline attribute of the selected text on and off.

The **Superscript** button is used to toggle the superscript attribute of the selected text on and off.

The **Subscript** button is used to toggle the subscript attribute of the selected text on and off.

The **Left Justify** button will left justify the selected text.

The **Center Justify** button will center justify the selected text.

The **Right Justify** button will right justify the selected text.

The **Select All** button will select all of the text in the memo field.

The **Cut** button will remove the selected text and place it in the clipboard.

The **Copy** button will copy the selected text to the clipboard.

The **Paste** button will paste the text in the clipboard, at the current position of the cursor in the text field.

The **Replace** button will replace the specified text in the text field.

The **Symbol** button will display a Symbol form. This form is used to place a symbol at the current cursor position in the text field. To select a symbol use the Font box to select the font containing the symbol and then select the desired symbol. After the desired symbol has been selected, press the Ok button to insert it into the text field. The WinLoG program comes with a font called "GAEA Symbols" that contains a variety of well and other symbols.

The **Spell Check** button will display a Spell Checker form and will check the spelling in the text field. The dictionary used to check the spelling is set in the program Preferences (see Chapter 3). When the Add button is pressed the word will be appended to the custom dictionary.

Sizing a Paragraph

The size of the paragraph can be changed using the Paragraph Text form above or the mouse. To adjust the size using the mouse, follow the procedure below.

1. Position the cursor at the boundary of the paragraph. The cursor should change to a set of arrows and the Status line should display ?Edit Size of Paragraph." The orientation of the arrows will indicate the direction that the boundary can be changed.

2. Press and hold the left mouse button down, and drag the boundary to its new position.

3. While dragging the boundary, a rectangle will be displayed showing its current location.

4. When the boundary is in the desired location, release the left mouse button.

Bitmaps

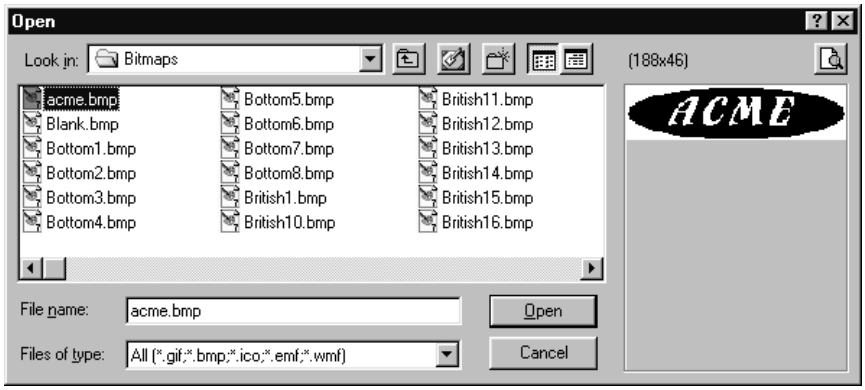
Bitmaps contained in Windows bitmap (BMP) files can be added anywhere on a legend. These bitmaps can be used to show company logos, site plans, and other graphical information. Bitmaps are displayed over top of any information on the legend. There is no limit to the number of bitmaps that can be displayed.

Adding a Bitmap

There are two methods that can be used to add a bitmap to a legend:

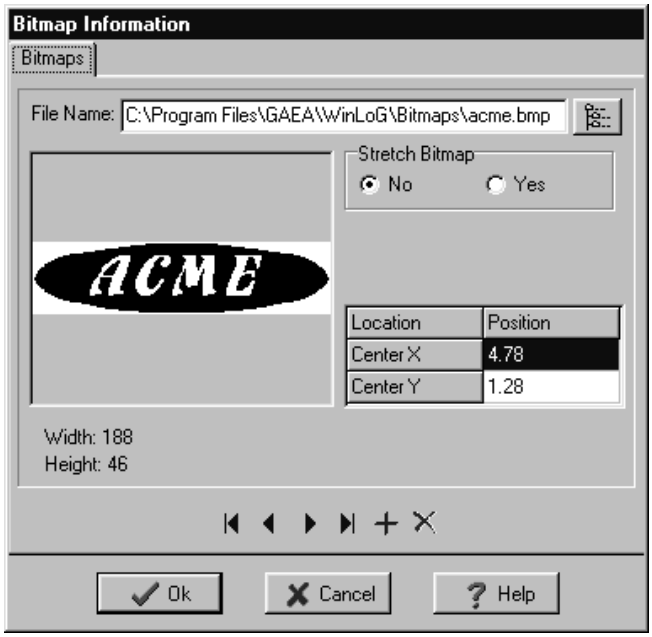
1. Click on the Bitmap button on the Toolbar. Next using the left mouse button click on the location of the center of the bitmap. The Open form below will then be displayed. Select the bitmap file and then press the Open button.

2. Select the Bitmaps menu item from the Edit menu or Popup menu and then clicking on the Add button on the form. The Open form below will then be displayed. Select the bitmap file and then press the Open button. Using this method, the location of the bitmap must be specified on the form as described below.



Editing a Bitmap

Existing Bitmaps can be edited by selecting the Bitmaps menu item of the Edit menu or clicking the left mouse button inside the Bitmap. After performing one of the above tasks, the Bitmap Information form on the next page will be displayed.



The buttons at the bottom of the this form are used for the following:

The **Start** button displays the first bitmap.

The **Previous** button displays the previous bitmap.

The **Next** button displays the next bitmap.

The **End** button displays the last bitmap.

The **Insert** button adds a new bitmap.

The **Delete** button deletes this bitmap.

The following information can be entered and edited using this form:

File Name: This is the name of the bitmap file to display on the template. To change the name of the file, edit this name or click on the button to the right of the name. If the button to the right is pressed, an Open bitmap file form will be displayed. Select the desired file and then press the Open button.

Stretch Bitmap: Select yes to stretch the bitmap to fit within the specified borders. If no is selected, only the center of the bitmap and page can be entered for the position. If the Bitmap button on the toolbar is used to add the bitmap, Stretch Bitmap is set to No.

Maintain Aspect Ratio: Select yes to keep the aspect ratio of the bitmap the same as stored in the file. If yes is selected the bottom of the bitmap will be automatically adjusted to maintain the aspect ratio. If Stretch Bitmap is set to No, then this field will not be displayed and it is assumed that the aspect ratio is maintained.

Left: This is the position of the left border of the bitmap in inches or millimeters from the left side of the page. If the Bitmap button on the toolbar is used to create the bitmap, this field will not be displayed. If Stretch Bitmap is set to No then this field will not be displayed. The units of measurement are specified in the page layout.

Right: This is the position of the right border of the bitmap in inches or millimeters from the left side of the page. If the Bitmap button on the toolbar is used to create the bitmap, this field will not be displayed. If Stretch Bitmap is set to No then this field will not be displayed.

Top: This is the position of the top border of the bitmap in inches or millimeters from the top of the page. If the Bitmap button on the toolbar is used to create the bitmap, this field will not be displayed. If Stretch Bitmap is set to No, then this field will not be displayed.

Bottom: This is the position of the bottom border of the bitmap in inches or millimeters from the top of the page. If the Stretch Bitmap is set to No or Maintain Aspect Ratio is set to yes, then this field will not be displayed and the bottom will be calculated by the program.

Center X: This is the bitmap's horizontal center in inches or millimeters from the left side of the page. If Stretch Bitmap is set to Yes, this field will not be displayed. If the Bitmap button on the toolbar is used to add the bitmap, this field will be filled in by the program.

Center Y: This is the bitmap's vertical center in inches or millimeters from the left side of the page. If Stretch Bitmap is set to Yes, this field will not be displayed. If the Bitmap button on the toolbar is used to add the bitmap, this field will be filled in by the program.

Sizing a Bitmap

The size of the bitmap can be changed using the Bitmap Information form above or the mouse. To adjust the size using the mouse, follow the procedure below.

1. Position the cursor at the boundary of the bitmap. The cursor should change to a set of arrows and the Status line should display “Edit Size of Bitmap." The orientation of the arrows will indicate the direction that the boundary can be changed.

2. Press and hold the left mouse button down, and drag the boundary to its new position.

3. While dragging the boundary, a rectangle will be displayed showing its current location.

4. When the boundary is in the desired location, release the left mouse button.

Lines and Arrows

Horizontal, vertical, and diagonal lines and arrows can be added anywhere on a legend. There is no limit to the number of lines and arrows that can be added.

Adding a Line or an Arrow

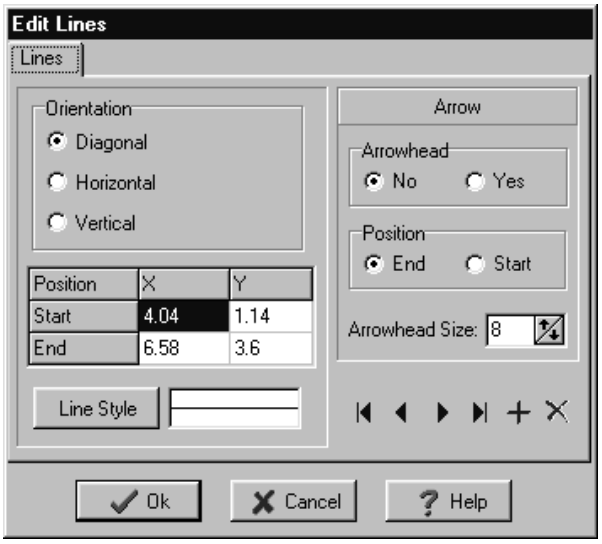
There are two methods that can be used to add a line or arrow to a legend:

1. By clicking on the Line button on the Toolbar. Next using the left mouse button click on the location of the starting point of the line or arrow. Then while holding down the left mouse button, drag the cursor to the end of the line or arrow and release the mouse button. The Edit Lines form described in the next section will then be displayed.

2. By selecting the Lines menu item from the Edit menu or Popup menu and then clicking on the Add button on the form. The Edit Lines form described in the next section will then be displayed. Using this method, the location of the line must be specified on the form.

Editing a Line or Arrow

Existing Lines can be edited by selecting the Lines menu item of the Edit menu or clicking the left mouse button at the start or end point of the line. After performing one of the above tasks, the Edit Lines form on the next page will be displayed.



The buttons at the bottom of the this form are used for the following:

The **Start** button displays the first line.

The **Previous** button displays the previous line.

The **Next** button displays the next line.

The **End** button displays the last line.

The **Insert** button adds a new line.

The **Delete** button deletes this line.

The following information can be entered and edited using this form:

Orientation: This is the orientation of the line, either diagonal, horizontal, or vertical. If the orientation is set to horizontal, the vertical position will be set to the y position of the start of the line. If the orientation is set to vertical, the horizontal position will be set to the x position of the start of the line.

Start X: This is the horizontal position of the start of the line in inches or millimeters from the left side of the page. If the Line button on the toolbar is used to create the line, the program will fill in this field. The units of measurement are specified in the page layout.

Start Y: This is the vertical position of the start of the line in inches or millimeters from the top of the page. If the Line button on the toolbar is used to create the line, the program will fill in this field.

End X: This is the horizontal position of the end of the line in inches or millimeters from the left side of the page. If the Line button on the toolbar is used to create the line, this field will be filled in by the program.

End Y: This is the vertical position of the end of the line in inches or millimeters from the top of the page. If the Line button on the toolbar is used to create the line, this field will be filled in by the program.

Line Style: This is the style of the line. The line style can be changed by pressing the Line Style button. A Line Properties form will then be displayed. Using this form the style, color, and width of the line can be set.

Arrowhead: To display an arrowhead at the start or end of the line select yes.

Arrow Position: This is position to place the arrowhead, either at the start or end of the line. If no arrowhead is selected above, this field will not appear.

Arrowhead Size: This is the size of the arrowhead. If no arrowhead is selected above, this field will not appear.

Rectangles

Rectangles can be added anywhere on a legend. There is no limit to the number of rectangles that can be added.

Adding a Rectangle

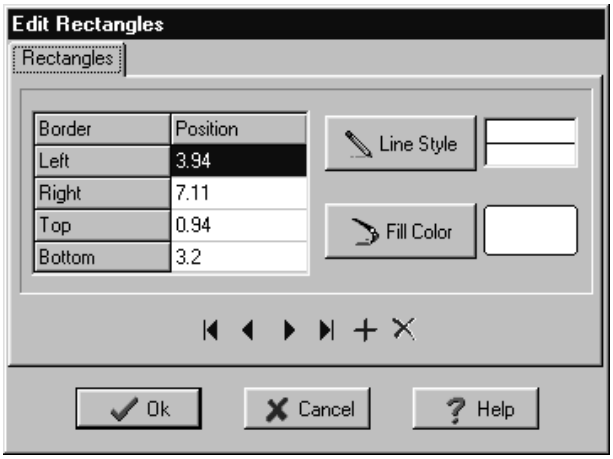
There are two methods that can be used to add a rectangle to a legend:

1. By clicking on the Rectangle button on the Toolbar. Next using the left mouse button click on the location of the upper left corner of the rectangle. Then while holding down the left mouse button, drag the cursor to the lower right corner of the rectangle and release the mouse button. The Edit Rectangle form described in the next section will then be displayed.

2. By selecting the Rectangles menu item from the Edit menu or Popup menu and then clicking on the Add button on the form. The Edit Rectangles form described in the next section will then be displayed. Using this method, the location of the rectangle must be specified on the form.

Editing a Rectangle

Existing rectangles can be edited by selecting the Rectangles menu item of the Edit menu or clicking the left mouse button inside the rectangle on the template. After performing one of the above tasks, the Edit Rectangle form on the next page will be displayed.



The buttons at the bottom of the this form are used for the following:

The **Start** button displays the first rectangle.

The **Previous** button displays the previous rectangle.

The **Next** button displays the next rectangle.

The **End** button displays the last rectangle.

The **Insert** button adds a new rectangle.

The **Delete** button deletes this rectangle.

The following information can be entered and edited using this form:

Left: This is the position of the left border of the rectangle in inches or millimeters from the left side of the page. If the Rectangle button on the toolbar is used to create the rectangle, the program will fill in this position. The units of measurement are specified in the page layout.

Right: This is the position of the right border of the rectangle in inches or millimeters from the left side of the page. If the Rectangle button on the toolbar is used to create the rectangle, this position will be filled in by the program.

Top: This is the position of the top border of the rectangle in inches or millimeters from the top of the page. If the Rectangle button on the toolbar is used to create the rectangle, this position will be filled in by the program.

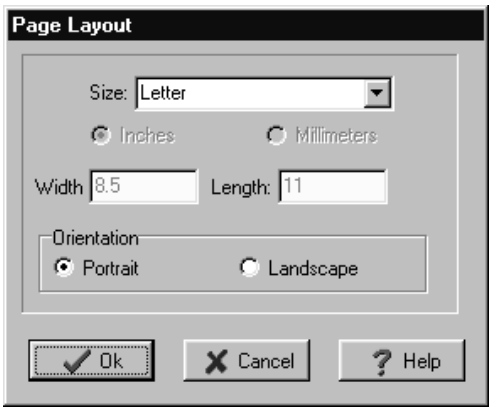
Bottom: This is the position of the bottom border of the rectangle in inches or millimeters from the top of the page. If the Rectangle button on the toolbar is used to create the rectangle, this position will be filled in by the program.

Line Style: This is the style of the rectangle border. The line style can be changed by pressing the Line Style button. A Line Properties form will then be displayed. Using this form the style, color, and width of the rectangle can be set.

Fill Color: This is the color to use to fill the inside of the rectangle. When the Fill Color button is pressed, a Color form will be displayed. Using this form, a basic color can be selected or a custom color can be specified.

Page Layout

The page layout is used to set the paper size and orientation for the printed legend. To change the page layout, select the Page Layout menu item from the Edit menu. The Page Layout form below will be displayed.



The following information can be entered on the Page Layout form:

Size: This is the page size of the template. When the arrow at the right is pressed, a list of available page sizes is displayed.

Inches or Millimeters: The units for the width and length of the page. These units will be used when specifying the layout of the legend. If the Page Size is "Custom", the units can be set to either inches or millimeters.

Width: If the page size is specified as "custom", the page horizontal width in inches must be specified.

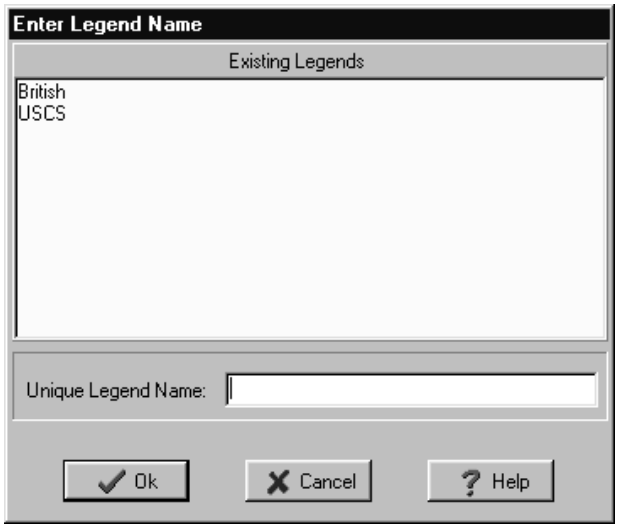
Length: If the page size is specified as "custom", the page vertical length in inches must be specified.

Orientation: This is the orientation of the page; either portrait (longer side is vertical) or landscape (longer side is horizontal).

Saving a Legend

To save a Legend after it has been edited either select the Save Legend menu item of the Legends submenu of the File menu or press the Save button on the legend toolbar.

To save the legend under a different name, press the SaveAs button on the legend toolbar. The Enter Legend Name form shown below will be displayed. Enter a unique legend name and then press the Ok button.



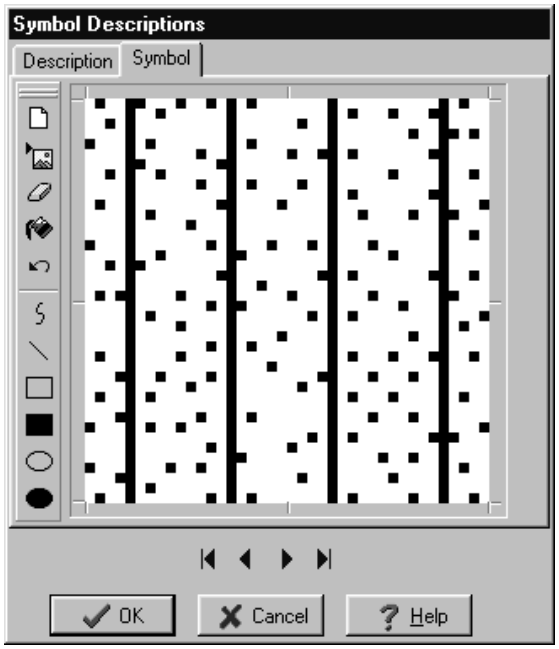
Deleting a Legend

To delete a legend, select the Delete Legend menu item from the Legends submenu of the File Menu. The Delete Legends form will be displayed.A single legend can be selected by clicking on it and pressing the Open button. A range of legends can be selected by clicking on the beginning of the range, and then holding down the Shift key while clicking on the end of the range. Multiple legends can be selected, by holding down the CTRL key while clicking on the legends.

Printing a Legend

To print a legend either click the right mouse button and select the Print menu item from the popup menu or press the Print button on the legend toolbar.

6. Legends



6. Legends

Legends are used to provide descriptions for the lithologic symbols, well components, and sample symbols shown in borehole logs. WinLoG comes with several previously defined legends. In addition, any number of new legends can be easily created.

Legends can be customized to display different lithologic symbol libraries, well component symbols, and sample symbols. In addition, they can include bitmaps, and paragraph text. A company logo and/or site map, stored as bitmaps, can also be included in a legend.

Although you can use an unlimited number of lithologic libraries (each with 18 symbols), only one library can be represented on the legend. If you need to show more libraries, it is recommended to create additional legends. If more symbols are specified then can be fit on the page, they will be truncated at the bottom of the page.

Each symbol also has a default symbol description stored in the library, which is used when creating legends. When a legend is created the default description will be used for the symbol description in the legend. If this description is then edited in the legend, the new description will only appear in that legend. The new description in the legend will not replace the default description in the library. To change the default description in the library, the description must be changed in the library as discussed in the next chapter. However, the actual symbols are the same in the legend as in the library and if edited in the legend the symbols in the library will change as well.

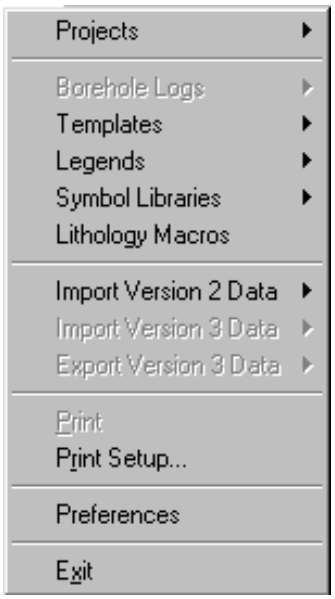
Legends are stored in the WinLoG master database. The format of the master database is Microsoft Access 97. This database is stored in the Main Database Directory. For a detailed discussion of the database structure, see Database Structure in the Introduction Chapter or Appendix B.

This chapter describes how to:

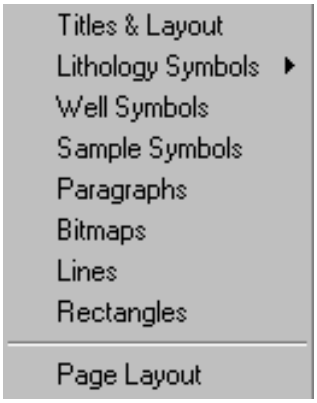
1. Create a new legend
2. Enter and edit the following information:
   - Titles and Layout
   - Lithology Symbols
   - Well Symbols
   - Sample Symbols
   - Paragraph text
   - Bitmaps
   - Lines and arrows
   - Rectangles
   - Page Layout
3. Save a legend
4. Delete a legend
5. Print a legend

These tasks can be performed using menu commands on the File menu and Edit menus or speed buttons on the Legend toolbar, shown below.

File Menu



Edit Menu



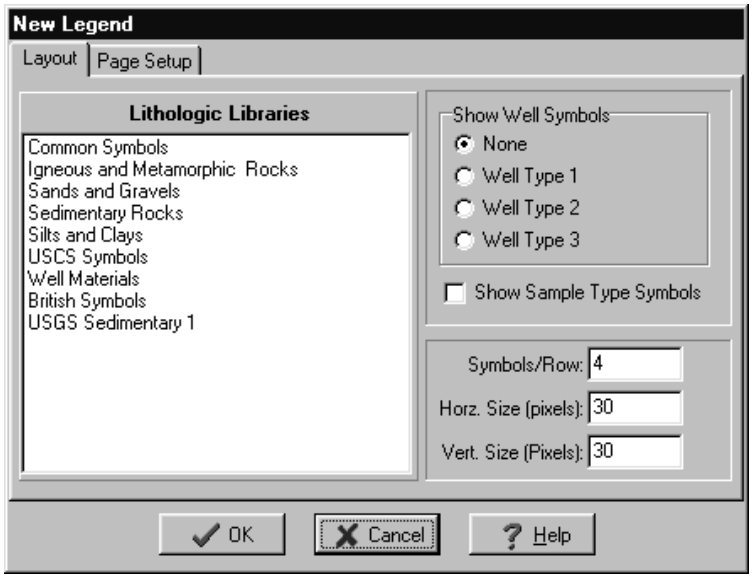
Legend Toolbar

Creating a New Legend

Since legends are stored in the WinLoG master database, they can be created and edited at any time (no project has to be open). To create a legend either select the New Legend menu item of the Legends sub menu of the File menu or click the New button on the Legend Toolbar.

After one of the above tasks is performed, the New Legend form above will be displayed. This form has two tabs, one for the layout of the legend and one for the page setup.

Layout Tab



The following information can be entered on the Layout tab:

Lithologic Libraries: The current lithologic libraries are displayed in a list. To include a lithologic library in the legend, select it from the list.

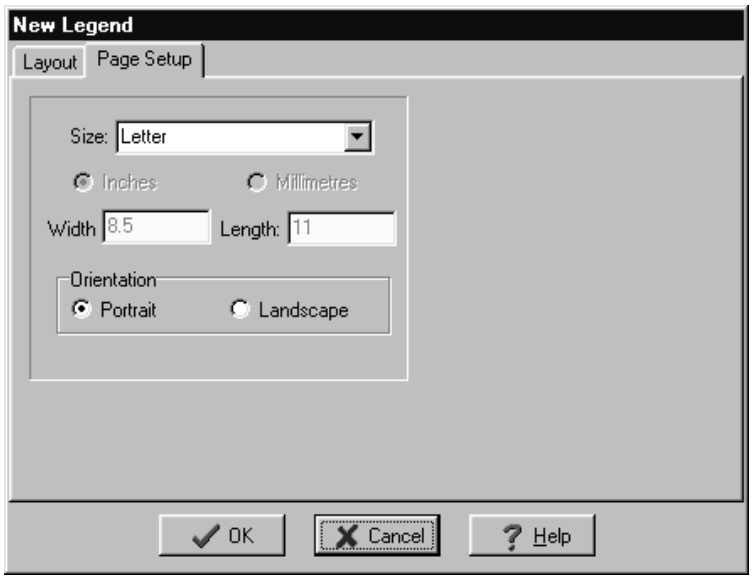
Show Well Symbols: Select whether to show well symbols in the legend. Choose none, Well Type 1, Well Type 2, or Well Type 3.

Show Sample Symbols: Check to show sample symbols in the legend.

Symbols/Row: This is the default number of symbols to draw per row. The number can be changed later in the layout.

Horizontal Pixel Size: This is the width to use when drawing the symbols.

Vertical Pixel Size: This is the height to use when drawing the symbols.



Page Setup Tab

The following information can be entered on the Page Setup tab shown above:

Size: This is the page size of the template. When the arrow at the right is pressed, a list of available page sizes is displayed.

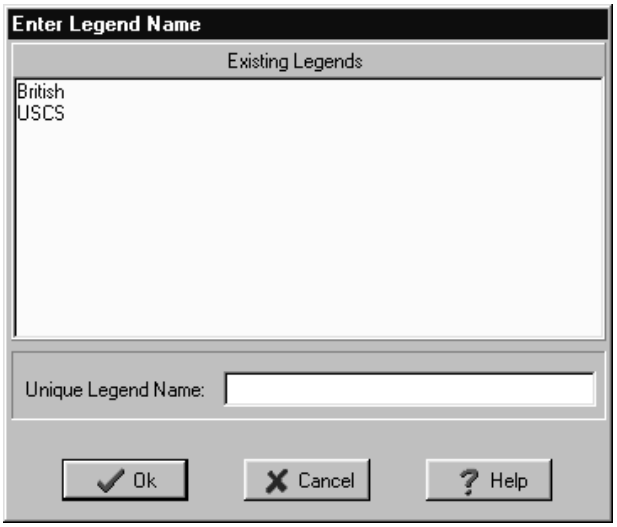
Inches or Millimeters: The units for the width and length of the page. These units will be used when specifying the layout of the legend. If the Page Size is "Custom", the units can be set to either inches or millimeters.

Custom Width: If the page size is specified as "custom", the page horizontal width in inches must be specified.

Custom Length: If the page size is specified as "custom", the page vertical length in inches must be specified.

Orientation: This is the orientation of the page; either portrait (longer side is vertical) or landscape (longer side is horizontal).

After the Ok button is pressed on the New Legend form, the Enter Legend Name form below will be displayed. Enter a unique name for the new legend and press Ok.



Editing a Legend

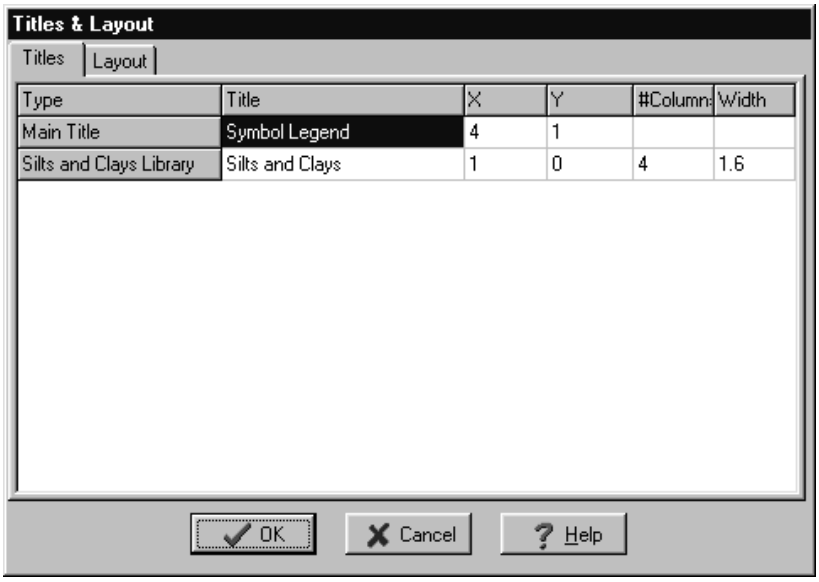
To enter or edit data in a legend, the legend must first be created as described above or an existing legend opened. Existing legends can be opened for editing by selecting the Open Legend menu item of the Legends sub menu of the File menu or clicking the Open button on the Legend Toolbar.

After the legend has been opened and displayed, the legend can be entered and edited as described in the sections below.

Titles and Layout

The titles in the legend and page layout can be changed by selecting the Titles menu item from the Edit menu or click the left mouse button on one of the titles in the legend.

Titles Tab



The Titles tab shown above is used to enter and edit the following information for each type of title:

Title: This is the title to display for this type of symbol (up to 255 characters). The types of titles will depend upon what symbols are displayed in the legend.

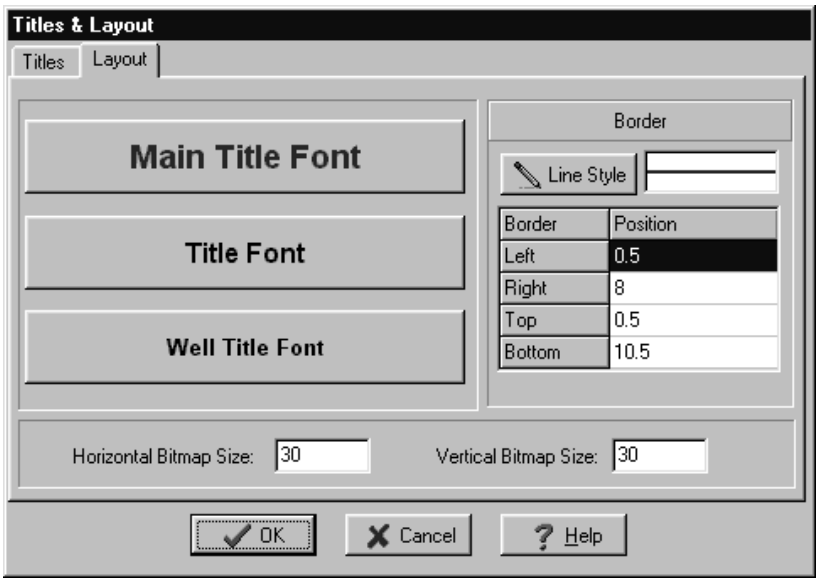
X: This is the horizontal position to place the title and symbols, in inches or millimeters from the left side of the page. The symbols associated with this title will be drawn beginning at this position. By adjusting the horizontal position, more than one set of symbols can be drawn across the page.The units of measurement are specified in the page layout.

Y: This is the vertical position to place the title and symbols, in inches or millimeters from the top of the page. The symbols associated with this title will be drawn below the title. If Y is set to zero, the program will calculate the position.

 # Columns: This is the number of symbols per row to draw for this type of symbol. The number of columns can be different for each type. This field is not used for "Main Title" and "Well Symbols" types, since there are no symbols associated with these types.

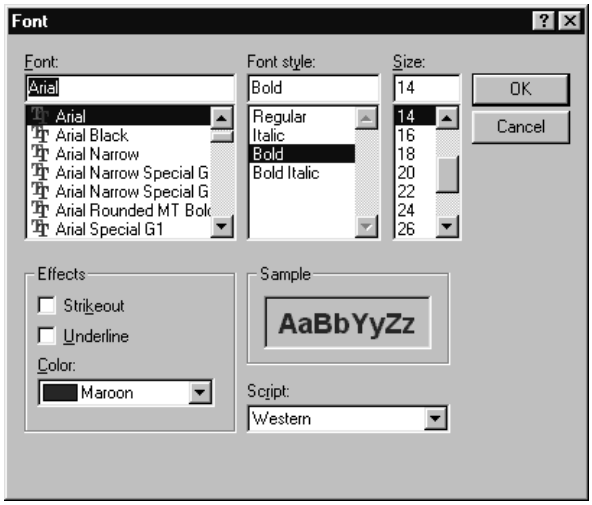
Width: This is the width of each column in inches. By adjusting the Width and X position, more than one set of symbols can be drawn across the page.

Layout Tab



Th layout tab shown above is used to enter and edit the following information for the legend:

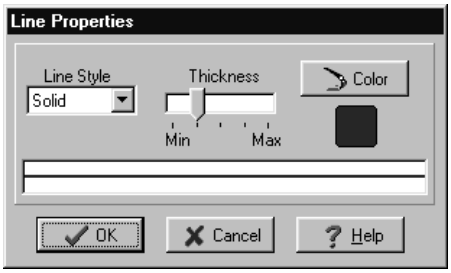
Main Title Font: This is the font to use for the main title of the legend. When the button is pressed, the Font form below is displayed. This form can be used to select the font name, style, size, and color.



Title Font: This is the font to use for the lithologic library title, well symbols title, and sample symbols title. When the button is pressed, the Font form shown on the previous page is displayed. This form can be used to select the font name, style, size, and color.

Well Title Font: This is the font to use for the sub-titles of the well symbols. For example, a Well Type 3 has the following sub-titles: Well Covers, Well Caps, Casings and Screens, Joints and Miscellaneous. When the button is pressed, the Font form shown on the previous page is displayed. This form can be used to select the font name, style, size, and color.

Line Style: This is the line style to use to draw the border around the legend. When the Line Style button is pressed, the Line Properties form shown below will be displayed. This form can be used to set the line style, width, and color.



Left Border: This is the position of the left side of the border in inches or millimeters from the left side of the page. The units of measurement are specified in the page layout.

Right Border: This is the position of the right side of the border in inches or millimeters from the left side of the page.

Top Border: This is the position of the top of the border in inches or millimeters from the top of the page.

Bottom Border: This is the position of the bottom of the border in inches or millimeters from the top of the page.

Horizontal Bitmap Size: This is the size, in pixels, to draw the bitmap on the legend. A size of 40 is recommended.

Vertical Bitmap Size: This is the size, in pixels, to draw the bitmap on the legend. A size of 40 is recommended.

Lithologic Symbols

Each legend can contain one lithologic symbol library. The library is selected when the legend is created. Lithologic symbols are used to represent soils, rocks, ice, and well packing material. Lithologic symbol libraries are created and edited using the Symbol Libraries submenu and are discussed in detail in Chapter 7.

The lithologic symbols and descriptions in the legend can be changed by selecting the lithologic library from the Lithologic Symbols submenu of the Edit menu or click the left mouse button on one of the lithologic symbols in the legend.

After one of the above tasks has been performed, the Symbol Descriptions form will be displayed. This form has two tabs, one for the description and one for the symbol. This form is identical for lithologic symbols, well symbols, and sample symbols. The use of this form is described in the Symbol Descriptions section below.

Well Symbols

Each legend can contain well symbols for a Type 1, 2, or 3 well. The type of well symbols is selected when the legend is created. The number of symbols will depend upon the type of well.

1. For a Type 1 well there will be 12 symbols used to represent the various casings, screens, seals, and packing. All of the descriptions and symbols can be edited for this type of well.

2. For a Type 2 well there will be 8 symbols for Pipes & Screens, 8 symbols for Top Fittings, 8 symbols for Bottom Fittings, and 8 symbols for Packing. All of the descriptions can be edited for this type of well. However, only the Packing symbols can be edited, since the other symbols are drawn to scale by the program.

3. For a Type 3 well there will be 12 symbols for Well Covers, 12 symbols for Well Caps, 30 symbols for Casings & Screens, and 12 symbols for Joints & Miscellaneous. Lithologic libraries are used for the seal and packing symbols in this type of well. All of the descriptions can be edited for this type of well. However, none of the symbols can be edited, since they are all drawn to scale by the program.

The well symbols and descriptions in the legend can be changed by selecting the well symbol menu item from the Well Symbols submenu of the Edit menu or click the left mouse button on one of the well symbols in the legend. After one of the above tasks has been performed, the Symbol Descriptions form will be displayed. This form has two tabs, one for the description and one for the symbol. This form is identical for lithologic symbols, well symbols, and sample symbols. The use of this form is described in the Symbol Descriptions section below.

Sample Symbols

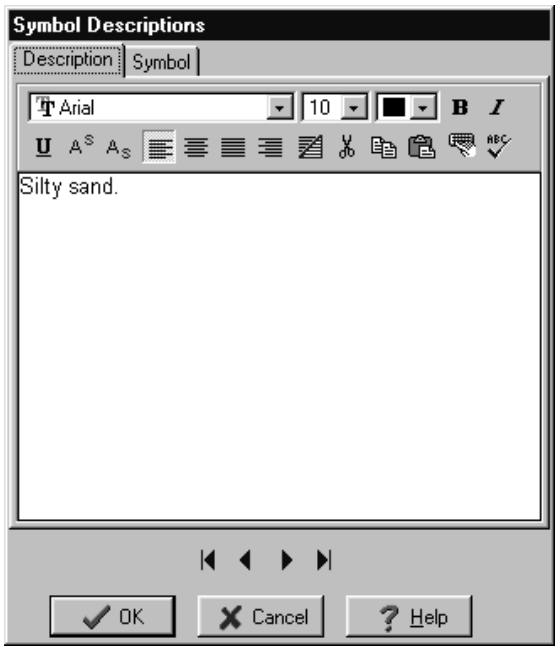
Symbols for the sample types can be displayed in the legend. This option is selected when the legend is created. There are 30 different sample symbols.

The sample symbols and descriptions in the legend can be changed by selecting the lithologic library from the Sample Symbols menu item of the Edit menu or click the left mouse button on one of the sample symbols in the legend. After one of the above tasks has been performed, the Symbol Descriptions form will be displayed. This form has two tabs, one for the description and one for the symbol. This form is identical for lithologic symbols, well symbols, and sample symbols. The use of this form is described in the Symbol Descriptions section below.

Symbol Descriptions

The method used to edit the descriptions and symbols is the same for lithologic symbols, well symbols, and sample symbols. Some types of symbols can not be edited; such as, certain well symbols. In this case, the symbol will be displayed but no editing allowed.

When one of the symbols is selected for editing the Symbol Descriptions form shown below will be displayed. This form has two tabs, one for the description and one for the symbol.



The buttons at the bottom of the form are used for the following:

The **Start** button displays the first symbol.

The **Previous** button displays the previous symbol.

The **Next** button displays the next symbol.

The **End** button displays the last symbol.

Description Tab

The Description tab, shown on the previous page is used to enter and edit the description for the symbol. There is no limit to the length of the description. At the top of the tab there is a Rich Text toolbar used to format the description, add symbols, and perform spell checking.

The use of the Rich Text toolbar is described below. Before selecting a speed button, the text to be modified should be selected with the mouse or the cursor should be placed at the desired insertion point.

The **Font Typeface** box is used to select the name of the font for the selected text.

The **Font Size** box is used to set the size of the font for the selected text.

The **Font Color** box is used to select the color of the font.

The **Bold** button is used to toggle the bold attribute of the selected text on and off.

The **Italics** button is used to toggle the italic attribute of the selected text on and off.

The **Underline** button is used to toggle the underline attribute of the selected text on and off.

The **Left** Justify button will left justify the selected text.

The **Center** Justify button will center justify the selected text.

The **Right** Justify button will right justify the selected text.

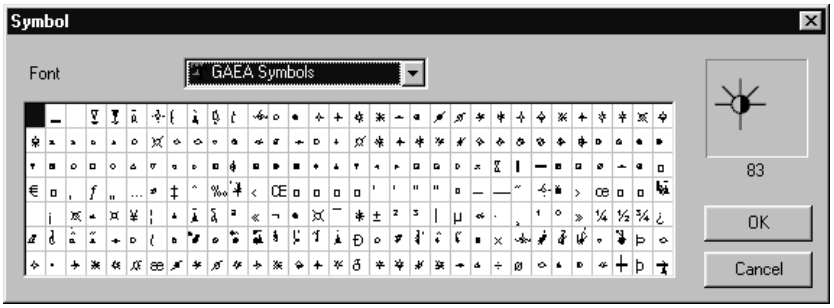
The **Select All** button will select all of the text in the company information.

The **Cut** button will remove the selected text and place it in the clipboard.

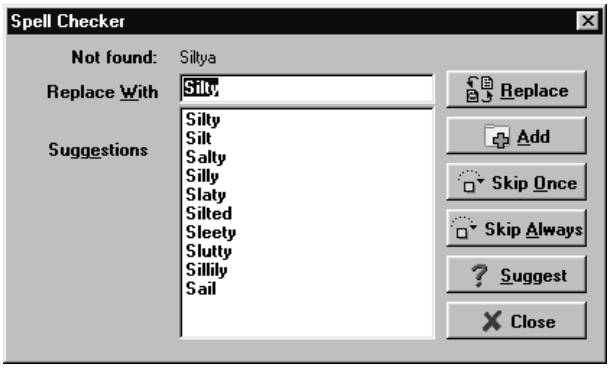
The **Copy** button will copy the selected text to the clipboard.

The **Paste** button will paste the text in the clipboard, at the current position of the cursor in the company information.

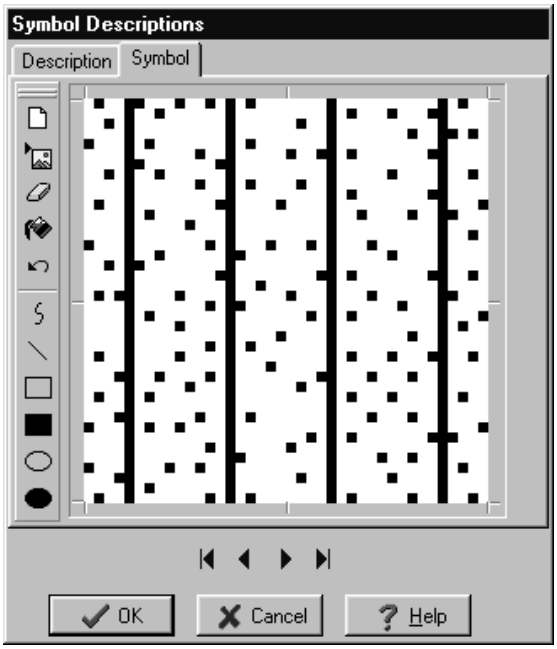
The **Symbol** button will display the Symbol form shown below. This form is used to place a symbol at the current cursor position in the memo field. To select a symbol use the Font box to select the font containing the symbol and then select the desired symbol. After the desired symbol has been selected, press the Ok button to insert it into the memo field. The WinLoG program comes with a font called "GAEA Symbols" that contains a variety of well and other symbols.



The Spell Check button will display the Spell Checker form shown on the next page and will check the spelling in the memo field. The dictionary used to check the spelling is set in the program Preferences (see Chapter 3). When the Add button is pressed the word will be appended to the custom dictionary.



Symbol Tab

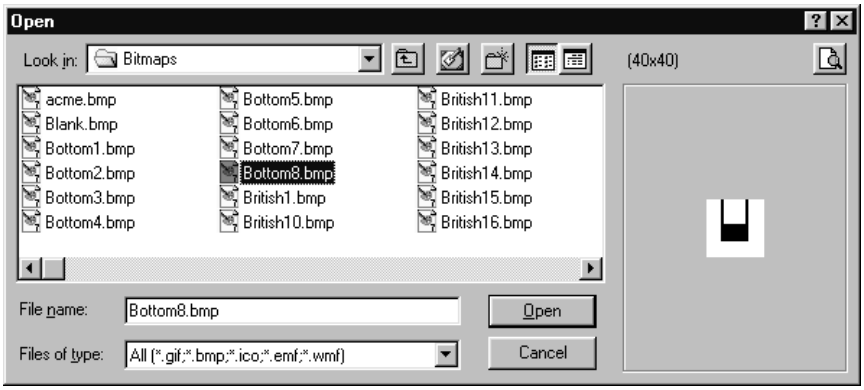


The Symbol tab, shown above, is used to edit the symbol. At the left side of the tab there is a toolbar used to edit the symbol. Some symbols, which are drawn to scale, can not be edited. If the symbol can not be edited the toolbar will be empty.

The buttons on the toolbar perform the following actions:

The **Clear** button is used to erase the current symbol and provide a blank page.

The **Import Picture** button is used to import a bitmap picture from a file into the current symbol. When this button is pressed, the Open bitmap form below will be displayed. Select the bitmap file to import and then press the Open button.



The **Erase** button is used to delete parts of the symbol. When this button is pressed the cursor will change to an eraser. To erase a part of the symbol, hold the left mouse button down and move the cursor over the area to be erased.

The **Fill** button is used to fill regions of symbols. When this button is pressed the cursor will change to a paint can. To fill an area click inside the region.

The **Undo** button is used to undo the previous edit operation.

The **Curve** button is used to draw a curved line on the symbol. When pressed the cursor will change to a pencil. To draw a curve, hold down the left mouse button and move the mouse. When finished drawing the line, release the mouse button.

The **Line** button is used to draw a straight line on the symbol. When pressed the cursor will change to a pencil. To draw a line, press and hold down the left mouse button at the start of the line. Move the mouse to the end of the line and release the mouse button.

The **Rectangle** button is used to draw a hollow rectangle on the symbol. When pressed the cursor will change to a cross. To draw a rectangle, press and hold down the left mouse button at the upper left corner of the rectangle. Move the mouse to the lower right corner of the rectangle and release the mouse button.

The **Filled Rectangle** button is used to draw a filled rectangle on the symbol. When pressed the cursor will change to a cross. To draw a rectangle, press and hold down the left mouse button at the upper left corner of the rectangle. Move the mouse to the lower right corner of the rectangle and release the mouse button.

The **Ellipse** button is used to draw a hollow ellipse on the symbol. When pressed the cursor will change to a cross. To draw an ellipse, press and hold down the left mouse button at the upper left corner of the ellipse. Move the mouse to the lower right corner of the ellipse and release the mouse button.

The **Filled Ellipse** button is used to draw a filled ellipse on the symbol. When pressed the cursor will change to a cross. To draw an ellipse, press and hold down the left mouse button at the upper left corner of the ellipse. Move the mouse to the lower right corner of the ellipse and release the mouse button.

Paragraphs

Floating paragraph text boxes can be added anywhere on a legend. These text boxes are displayed over top of any information on the legend. There is no limit to the number of paragraph text boxes that can be displayed. Paragraph text boxes are typically used to add comments to a legend.

Adding a Paragraph

There are two methods that can be used to add a Paragraph Text box to a legend:

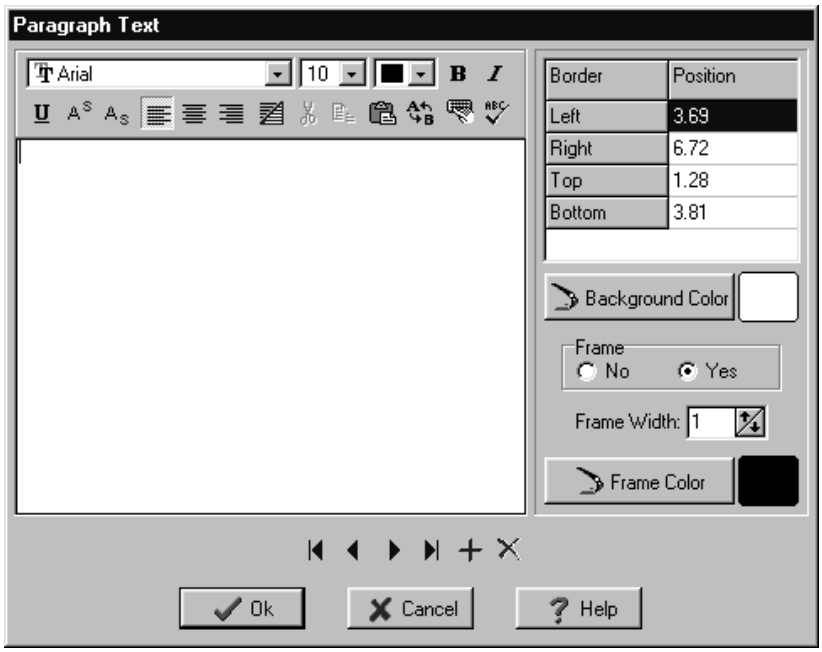
1. By clicking on the Paragraph button on the Toolbar. Next using the left mouse button click on the location of the upper left corner of the paragraph text box. Then while holding the left mouse button down drag the mouse to the location of the lower right corner, and then release the mouse button. While the mouse button is held down a marquee box will be drawn to indicate the location of the paragraph box. After the button has been released, the Paragraph Text form shown in the section below will be displayed.

2. By selecting the Paragraph Text menu item from the Edit menu or Popup menu and then clicking on the Add button on the Paragraph Text form. This will create a new paragraph. Using this method, the location of the paragraph must be specified on the form as described below.

Editing a Paragraph

Existing Paragraph data can be edited by selecting the Paragraph Text menu item of the Edit menu or clicking the left mouse button inside the Paragraph Text of the legend. After performing one of the above tasks, the Paragraph Text form on the next page will be displayed.

The buttons at the bottom of the this form are used for the following:



The **Start** button displays the first paragraph.

The **Previous** button displays the previous paragraph.

The **Next** button displays the next paragraph.

The **End** button displays the last paragraph.

The **Insert** button creates a new paragraph.

The **Delete** button deletes this paragraph.

The following information can be entered and edited using this form:

Text: This is the text for the paragraph. There is no limit to the length of the text. The Rich Text toolbar at the top of the form is used to format the text. This toolbar is described below.

Left: This is the position of the left border of the paragraph in inches or millimeters from the left side of the page. If the Paragraph button on the toolbar is used to create the paragraph, this position will be filled in by the program. The units of measurement are specified in the page layout.

Right: This is the position of the right border of the paragraph in inches or millimeters from the left side of the page. If the Paragraph button on the toolbar is used to create the paragraph, this position will be filled in by the program.

Top: This is the position of the top border of the paragraph in inches or millimeters from the top of the page. If the Paragraph button on the toolbar is used to create the paragraph, this position will be filled in by the program.

Bottom: This is the position of the bottom border of the paragraph in inches or millimeters from the top of the page. If the Paragraph button on the toolbar is used to create the paragraph, this position will be filled in by the program.

Background Color: This is the background color of the paragraph text box. When the Background Color button is pressed, a Color form is displayed. Using this form, a basic color can be selected or a custom color can be specified.

Frame: Select yes to display a frame around the paragraph text.

Frame Width: This is the line width of the frame around the paragraph text. If no frame is selected above, this field will not be displayed.

Frame Color: This is the color of the frame to display around the paragraph text. When the Frame Color button is pressed a Color form is displayed. Using this form, a basic color can be selected or a custom color can be specified. If no frame is selected above, this field will not be displayed.

At the top of the Paragraph Text form is the Rich Text toolbar, this toolbar can be used to modify the font characteristics of the text. Before selecting a speed button, the text to be modified should be selected with the mouse.

The speed buttons of the toolbar perform the following functions:

The **Font Typeface** box is used to select the name of the font to use for the selected text.

The **Font Size** box is used to set the size of the font for the selected text.

The **Font Color** box is used to select the color of the font for the selected text.

The **Bold** button is used to toggle the bold attribute of the selected text on and off.

The **Italics** button is used to toggle the italic attribute of the selected text on and off.

The **Underline** button is used to toggle the underline attribute of the selected text on and off.

The **Superscript** button is used to toggle the superscript attribute of the selected text on and off.

The **Subscript** button is used to toggle the subscript attribute of the selected text on and off.

The **Left Justify** button will left justify the selected text.

The **Center Justify** button will center justify the selected text.

The **Right Justify** button will right justify the selected text.

The **Select All** button will select all of the text in the memo field.

The **Cut** button will remove the selected text and place it in the clipboard.

The **Copy** button will copy the selected text to the clipboard.

The **Paste** button will paste the text in the clipboard, at the current position of the cursor in the text field.

The **Replace** button will replace the specified text in the text field.

The **Symbol** button will display a Symbol form. This form is used to place a symbol at the current cursor position in the text field. To select a symbol use the Font box to select the font containing the symbol and then select the desired symbol. After the desired symbol has been selected, press the Ok button to insert it into the text field. The WinLoG program comes with a font called "GAEA Symbols" that contains a variety of well and other symbols.

The **Spell Check** button will display a Spell Checker form and will check the spelling in the text field. The dictionary used to check the spelling is set in the program Preferences (see Chapter 3). When the Add button is pressed the word will be appended to the custom dictionary.

Sizing a Paragraph

The size of the paragraph can be changed using the Paragraph Text form above or the mouse. To adjust the size using the mouse, follow the procedure below.

1. Position the cursor at the boundary of the paragraph. The cursor should change to a set of arrows and the Status line should display ?Edit Size of Paragraph." The orientation of the arrows will indicate the direction that the boundary can be changed.

2. Press and hold the left mouse button down, and drag the boundary to its new position.

3. While dragging the boundary, a rectangle will be displayed showing its current location.

4. When the boundary is in the desired location, release the left mouse button.

Bitmaps

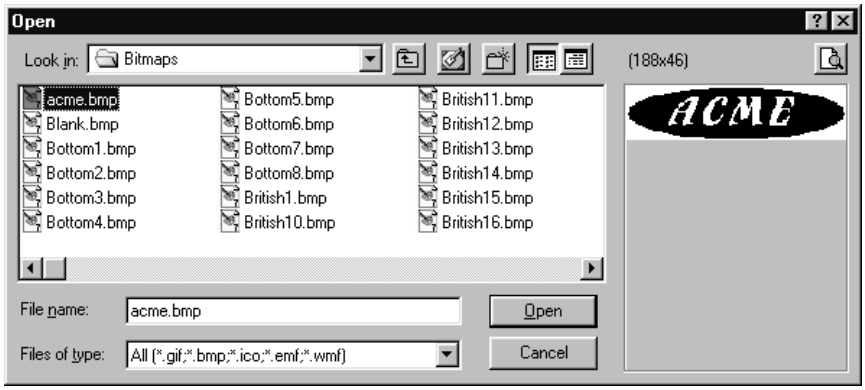
Bitmaps contained in Windows bitmap (BMP) files can be added anywhere on a legend. These bitmaps can be used to show company logos, site plans, and other graphical information. Bitmaps are displayed over top of any information on the legend. There is no limit to the number of bitmaps that can be displayed.

Adding a Bitmap

There are two methods that can be used to add a bitmap to a legend:

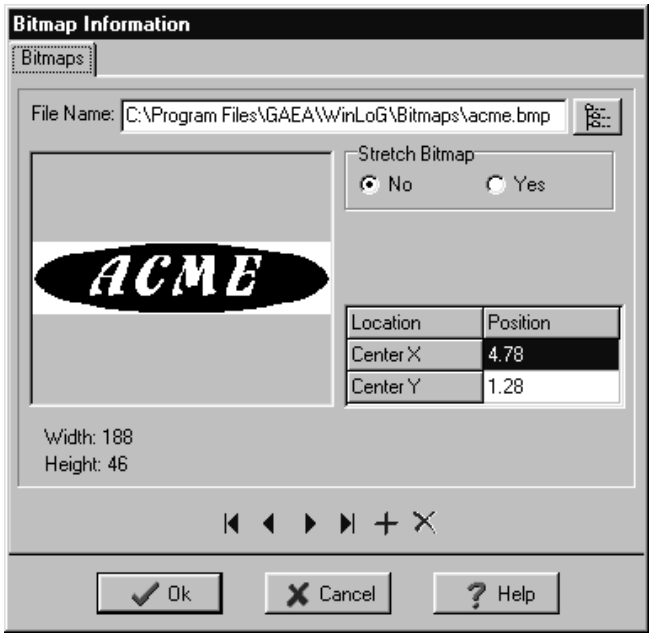
1. Click on the Bitmap button on the Toolbar. Next using the left mouse button click on the location of the center of the bitmap. The Open form below will then be displayed. Select the bitmap file and then press the Open button.

2. Select the Bitmaps menu item from the Edit menu or Popup menu and then clicking on the Add button on the form. The Open form below will then be displayed. Select the bitmap file and then press the Open button. Using this method, the location of the bitmap must be specified on the form as described below.



Editing a Bitmap

Existing Bitmaps can be edited by selecting the Bitmaps menu item of the Edit menu or clicking the left mouse button inside the Bitmap. After performing one of the above tasks, the Bitmap Information form on the next page will be displayed.



The buttons at the bottom of the this form are used for the following:

The **Start** button displays the first bitmap.

The **Previous** button displays the previous bitmap.

The **Next** button displays the next bitmap.

The **End** button displays the last bitmap.

The **Insert** button adds a new bitmap.

The **Delete** button deletes this bitmap.

The following information can be entered and edited using this form:

File Name: This is the name of the bitmap file to display on the template. To change the name of the file, edit this name or click on the button to the right of the name. If the button to the right is pressed, an Open bitmap file form will be displayed. Select the desired file and then press the Open button.

Stretch Bitmap: Select yes to stretch the bitmap to fit within the specified borders. If no is selected, only the center of the bitmap and page can be entered for the position. If the Bitmap button on the toolbar is used to add the bitmap, Stretch Bitmap is set to No.

Maintain Aspect Ratio: Select yes to keep the aspect ratio of the bitmap the same as stored in the file. If yes is selected the bottom of the bitmap will be automatically adjusted to maintain the aspect ratio. If Stretch Bitmap is set to No, then this field will not be displayed and it is assumed that the aspect ratio is maintained.

Left: This is the position of the left border of the bitmap in inches or millimeters from the left side of the page. If the Bitmap button on the toolbar is used to create the bitmap, this field will not be displayed. If Stretch Bitmap is set to No then this field will not be displayed. The units of measurement are specified in the page layout.

Right: This is the position of the right border of the bitmap in inches or millimeters from the left side of the page. If the Bitmap button on the toolbar is used to create the bitmap, this field will not be displayed. If Stretch Bitmap is set to No then this field will not be displayed.

Top: This is the position of the top border of the bitmap in inches or millimeters from the top of the page. If the Bitmap button on the toolbar is used to create the bitmap, this field will not be displayed. If Stretch Bitmap is set to No, then this field will not be displayed.

Bottom: This is the position of the bottom border of the bitmap in inches or millimeters from the top of the page. If the Stretch Bitmap is set to No or Maintain Aspect Ratio is set to yes, then this field will not be displayed and the bottom will be calculated by the program.

Center X: This is the bitmap's horizontal center in inches or millimeters from the left side of the page. If Stretch Bitmap is set to Yes, this field will not be displayed. If the Bitmap button on the toolbar is used to add the bitmap, this field will be filled in by the program.

Center Y: This is the bitmap's vertical center in inches or millimeters from the left side of the page. If Stretch Bitmap is set to Yes, this field will not be displayed. If the Bitmap button on the toolbar is used to add the bitmap, this field will be filled in by the program.

Sizing a Bitmap

The size of the bitmap can be changed using the Bitmap Information form above or the mouse. To adjust the size using the mouse, follow the procedure below.

1. Position the cursor at the boundary of the bitmap. The cursor should change to a set of arrows and the Status line should display “Edit Size of Bitmap." The orientation of the arrows will indicate the direction that the boundary can be changed.

2. Press and hold the left mouse button down, and drag the boundary to its new position.

3. While dragging the boundary, a rectangle will be displayed showing its current location.

4. When the boundary is in the desired location, release the left mouse button.

Lines and Arrows

Horizontal, vertical, and diagonal lines and arrows can be added anywhere on a legend. There is no limit to the number of lines and arrows that can be added.

Adding a Line or an Arrow

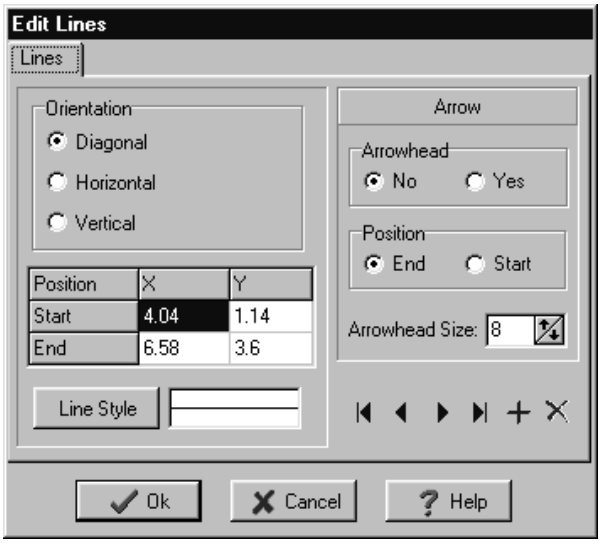
There are two methods that can be used to add a line or arrow to a legend:

1. By clicking on the Line button on the Toolbar. Next using the left mouse button click on the location of the starting point of the line or arrow. Then while holding down the left mouse button, drag the cursor to the end of the line or arrow and release the mouse button. The Edit Lines form described in the next section will then be displayed.

2. By selecting the Lines menu item from the Edit menu or Popup menu and then clicking on the Add button on the form. The Edit Lines form described in the next section will then be displayed. Using this method, the location of the line must be specified on the form.

Editing a Line or Arrow

Existing Lines can be edited by selecting the Lines menu item of the Edit menu or clicking the left mouse button at the start or end point of the line. After performing one of the above tasks, the Edit Lines form on the next page will be displayed.



The buttons at the bottom of the this form are used for the following:

The **Start** button displays the first line.

The **Previous** button displays the previous line.

The **Next** button displays the next line.

The **End** button displays the last line.

The **Insert** button adds a new line.

The **Delete** button deletes this line.

The following information can be entered and edited using this form:

Orientation: This is the orientation of the line, either diagonal, horizontal, or vertical. If the orientation is set to horizontal, the vertical position will be set to the y position of the start of the line. If the orientation is set to vertical, the horizontal position will be set to the x position of the start of the line.

Start X: This is the horizontal position of the start of the line in inches or millimeters from the left side of the page. If the Line button on the toolbar is used to create the line, the program will fill in this field. The units of measurement are specified in the page layout.

Start Y: This is the vertical position of the start of the line in inches or millimeters from the top of the page. If the Line button on the toolbar is used to create the line, the program will fill in this field.

End X: This is the horizontal position of the end of the line in inches or millimeters from the left side of the page. If the Line button on the toolbar is used to create the line, this field will be filled in by the program.

End Y: This is the vertical position of the end of the line in inches or millimeters from the top of the page. If the Line button on the toolbar is used to create the line, this field will be filled in by the program.

Line Style: This is the style of the line. The line style can be changed by pressing the Line Style button. A Line Properties form will then be displayed. Using this form the style, color, and width of the line can be set.

Arrowhead: To display an arrowhead at the start or end of the line select yes.

Arrow Position: This is position to place the arrowhead, either at the start or end of the line. If no arrowhead is selected above, this field will not appear.

Arrowhead Size: This is the size of the arrowhead. If no arrowhead is selected above, this field will not appear.

Rectangles

Rectangles can be added anywhere on a legend. There is no limit to the number of rectangles that can be added.

Adding a Rectangle

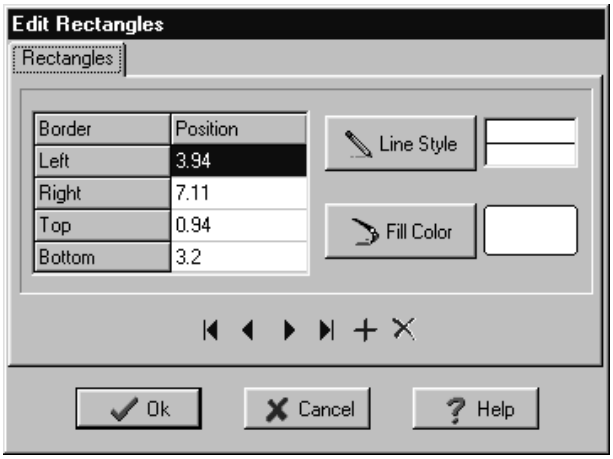
There are two methods that can be used to add a rectangle to a legend:

1. By clicking on the Rectangle button on the Toolbar. Next using the left mouse button click on the location of the upper left corner of the rectangle. Then while holding down the left mouse button, drag the cursor to the lower right corner of the rectangle and release the mouse button. The Edit Rectangle form described in the next section will then be displayed.

2. By selecting the Rectangles menu item from the Edit menu or Popup menu and then clicking on the Add button on the form. The Edit Rectangles form described in the next section will then be displayed. Using this method, the location of the rectangle must be specified on the form.

Editing a Rectangle

Existing rectangles can be edited by selecting the Rectangles menu item of the Edit menu or clicking the left mouse button inside the rectangle on the template. After performing one of the above tasks, the Edit Rectangle form on the next page will be displayed.



The buttons at the bottom of the this form are used for the following:

The **Start** button displays the first rectangle.

The **Previous** button displays the previous rectangle.

The **Next** button displays the next rectangle.

The **End** button displays the last rectangle.

The **Insert** button adds a new rectangle.

The **Delete** button deletes this rectangle.

The following information can be entered and edited using this form:

Left: This is the position of the left border of the rectangle in inches or millimeters from the left side of the page. If the Rectangle button on the toolbar is used to create the rectangle, the program will fill in this position. The units of measurement are specified in the page layout.

Right: This is the position of the right border of the rectangle in inches or millimeters from the left side of the page. If the Rectangle button on the toolbar is used to create the rectangle, this position will be filled in by the program.

Top: This is the position of the top border of the rectangle in inches or millimeters from the top of the page. If the Rectangle button on the toolbar is used to create the rectangle, this position will be filled in by the program.

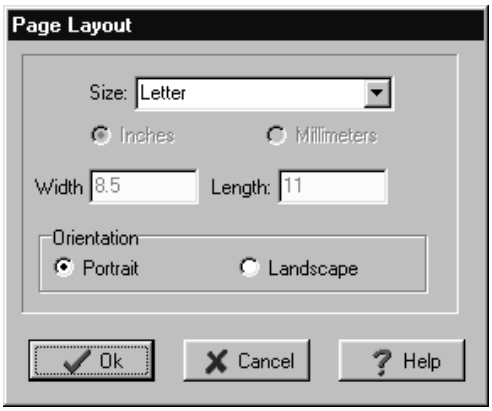
Bottom: This is the position of the bottom border of the rectangle in inches or millimeters from the top of the page. If the Rectangle button on the toolbar is used to create the rectangle, this position will be filled in by the program.

Line Style: This is the style of the rectangle border. The line style can be changed by pressing the Line Style button. A Line Properties form will then be displayed. Using this form the style, color, and width of the rectangle can be set.

Fill Color: This is the color to use to fill the inside of the rectangle. When the Fill Color button is pressed, a Color form will be displayed. Using this form, a basic color can be selected or a custom color can be specified.

Page Layout

The page layout is used to set the paper size and orientation for the printed legend. To change the page layout, select the Page Layout menu item from the Edit menu. The Page Layout form below will be displayed.



The following information can be entered on the Page Layout form:

Size: This is the page size of the template. When the arrow at the right is pressed, a list of available page sizes is displayed.

Inches or Millimeters: The units for the width and length of the page. These units will be used when specifying the layout of the legend. If the Page Size is "Custom", the units can be set to either inches or millimeters.

Width: If the page size is specified as "custom", the page horizontal width in inches must be specified.

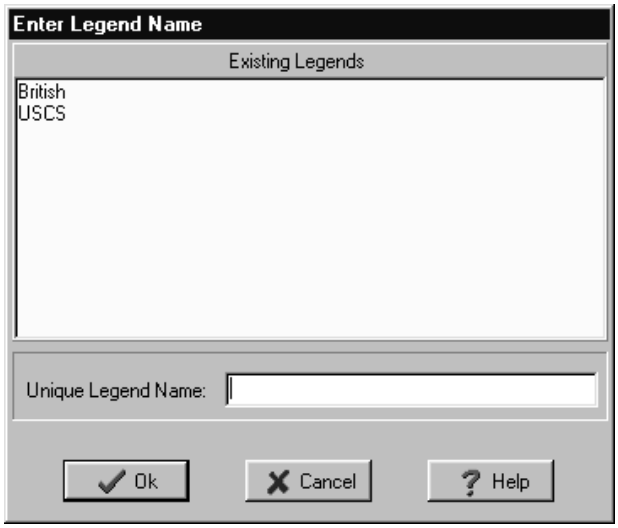
Length: If the page size is specified as "custom", the page vertical length in inches must be specified.

Orientation: This is the orientation of the page; either portrait (longer side is vertical) or landscape (longer side is horizontal).

Saving a Legend

To save a Legend after it has been edited either select the Save Legend menu item of the Legends submenu of the File menu or press the Save button on the legend toolbar.

To save the legend under a different name, press the SaveAs button on the legend toolbar. The Enter Legend Name form shown below will be displayed. Enter a unique legend name and then press the Ok button.



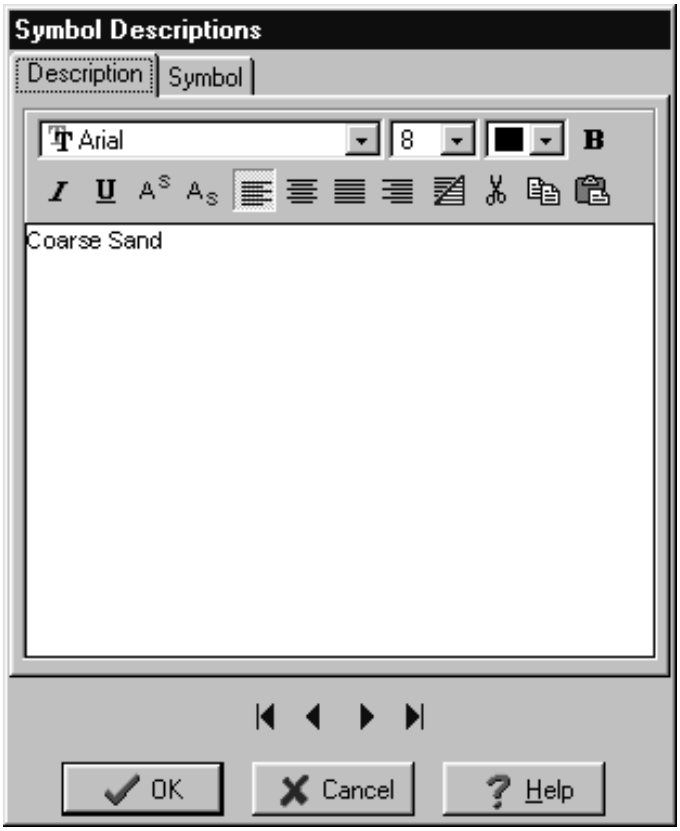
Deleting a Legend

To delete a legend, select the Delete Legend menu item from the Legends submenu of the File Menu. The Delete Legends form will be displayed.A single legend can be selected by clicking on it and pressing the Open button. A range of legends can be selected by clicking on the beginning of the range, and then holding down the Shift key while clicking on the end of the range. Multiple legends can be selected, by holding down the CTRL key while clicking on the legends.

Printing a Legend

To print a legend either click the right mouse button and select the Print menu item from the popup menu or press the Print button on the legend toolbar.

7. Symbol Libraries



7. Symbol Libraries

Libraries are used to store lithologic bitmaps that can be used for the strata symbols. Each library contains 18 bitmap symbols. WinLoG log comes with several previously defined libraries. In addition, any number of new libraries can be created, making the number of lithologic symbols available unlimited.

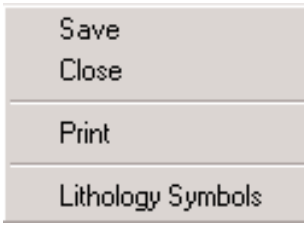
Each symbol also has a default symbol description stored in the library, which is used when creating legends. When a legend is created the default description can be used for the symbol description of the legend. If this description is then edited in the legend, the new description will only appear in that legend. The new description in the legend will not replace the default description in the library. To change the default description the description must be changed in the library as discussed below. However, the actual symbols are the same in the legend as in the library and if edited in the library the symbols in the legend will change as well.

Libraries are stored in the master project database so that they are accessible by all programs. The format of the master database is Microsoft Access 97. This database is stored in the Main Database Directory.

This chapter describes how to:

1. Create a new library
2. Edit a library
3. Save a library
4. Print a library

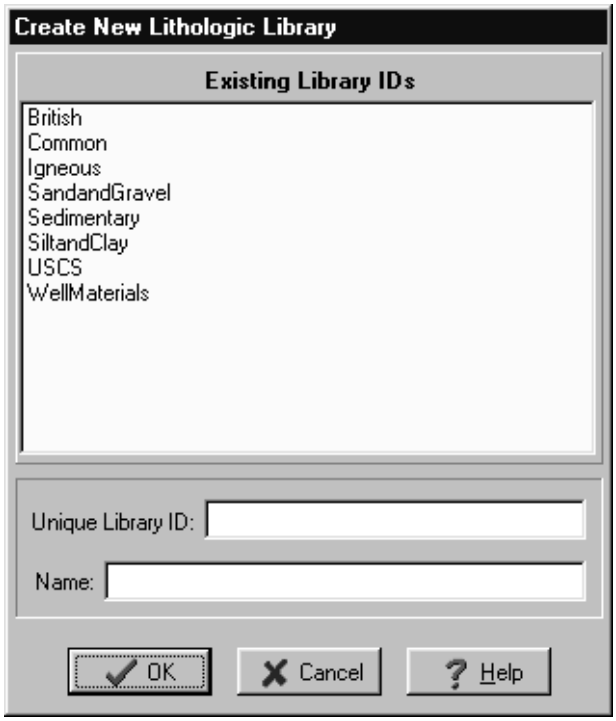
These tasks can be performed using menu commands on the Edit menu or buttons on the Library Toolbar.



Creating a New Symbol Library

Since libraries are stored in the master project database, they can be created and edited at any time (no project has to be open).

To create a library either select the New Library menu item of the Symbol Libraries submenu of the File menu or click the New button on the Library Toolbar. The Create New Lithologic Library form below will be displayed.



Tip

To make it easier to enter the symbol library data, the Symbol Library toolbar should be turned on if it is not currently displayed. If the Show Symbol Library Toolbar option in the View menu is not checked, click on the option to display the toolbar. If the Symbol Library toolbar is displayed in collapsed mode, then click on the "LIB" button to expand the toolbar.

The following information can be entered on this form:

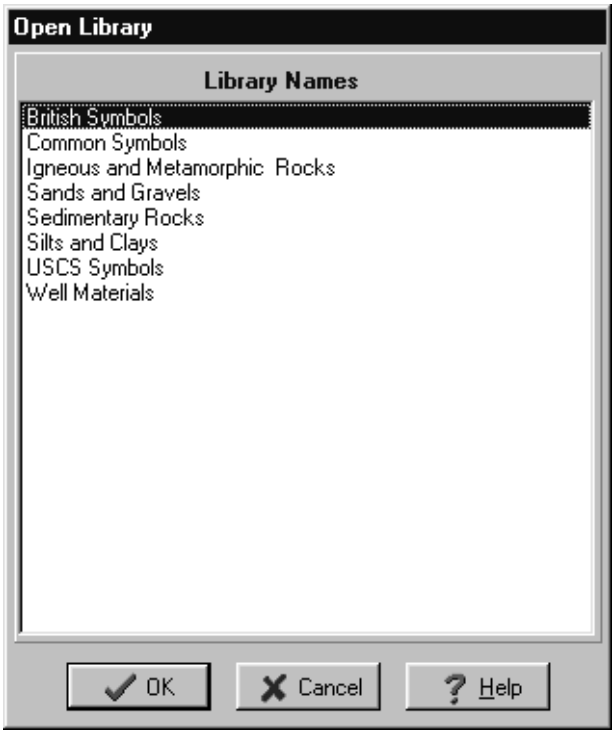
Unique Library ID: This is a unique id or name for the library (up to 100 characters). The Library ID cannot include any of the characters "/ \ # | * ( )".

Name: This is the name of the library (up to 255 characters).

After the above information has been entered a blank library will be created and displayed. This library will contain 18 blank symbols and descriptions, that can be edited and saved as discussed below.

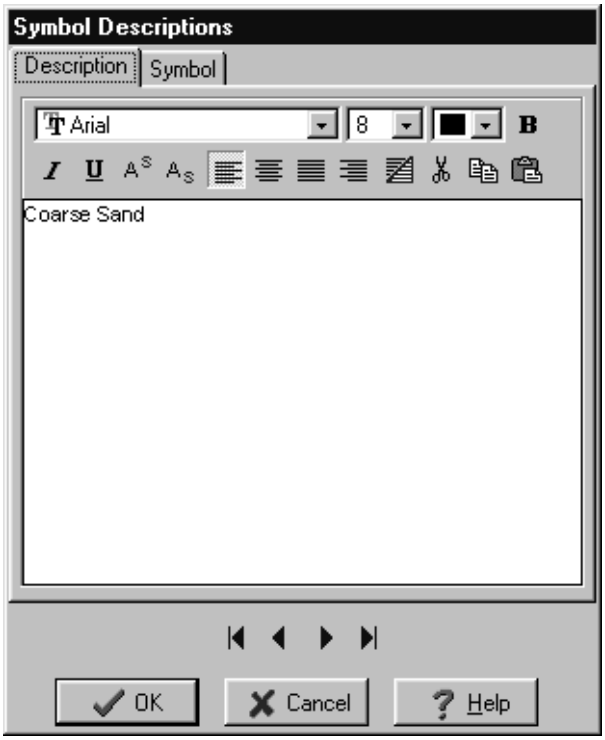
Opening a Symbol Library

To open an existing library either select the Open Library menu item of the Symbol Libraries submenu of the File menu or click the Open button on the Library Toolbar. The Open Library form below will be displayed. Select the library to open and then press the Ok button.



Editing a Symbol Library

Each library can contain 18 lithologic symbols. Lithologic symbols are used to represent soils and rocks. The lithologic symbols and descriptions in the library can be changed by selecting the Lithologic Symbols menu item of the Edit menu or clicking on one of the lithologic symbols in the library. The Symbol Descriptions form below will then be displayed. This form has two tabs, one for the description and one for the symbol.



The buttons at the bottom of the form are used for the following:

The **Start** button displays the first symbol.

The **Previous** button displays the previous symbol.

The **Next** button displays the next symbol.

The **End** button displays the last symbol.

Description Tab

The Description tab, shown on the previous page is used to enter and edit the description for the symbol. There is no limit to the length of the description. At the top of the tab there is a Rich Text toolbar used to format the description, add symbols, and perform spell checking.

The use of the Rich Text toolbar is described below. Before selecting a speed button the text to be modified should be selected with the mouse or the cursor should be placed at the desired insertion point.

The **Font Typeface** box is used to select the name of the font to use for the selected text.

The **Font Size** box is used to set the size of the font for the selected text.

The **Font Color** box is used to select the color of the font for the selected text.

The **Bold** button is used to toggle the bold attribute of the selected text on and off.

The **Italics** button is used to toggle the italic attribute of the selected text on and off.

The **Underline** button is used to toggle the underline attribute of the selected text on and off.

The **Superscript** button is used to toggle the superscript attribute of the selected text on and off.

The **Subscript** button is used to toggle the subscript attribute of the selected text on and off.

The **Left Justify** button will left justify the selected text.

The **Center Justify** button will center justify the selected text.

The **Right Justify** button will right justify the selected text.

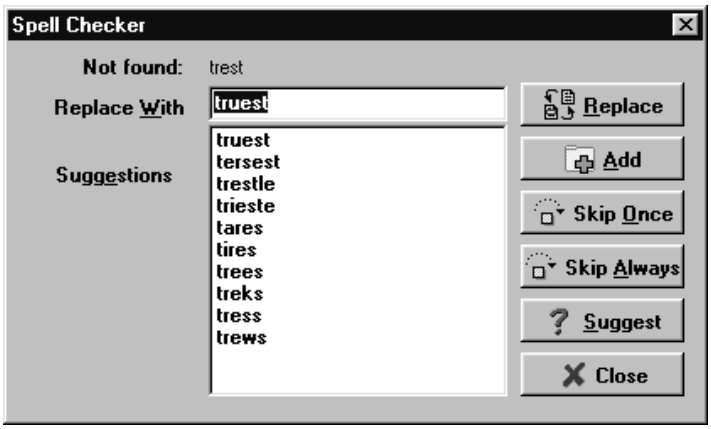
The **Select All** button will select all of the text in the description.

The **Cut** button will remove the selected text and place it in the clipboard.

The **Copy** button will copy the selected text to the clipboard.

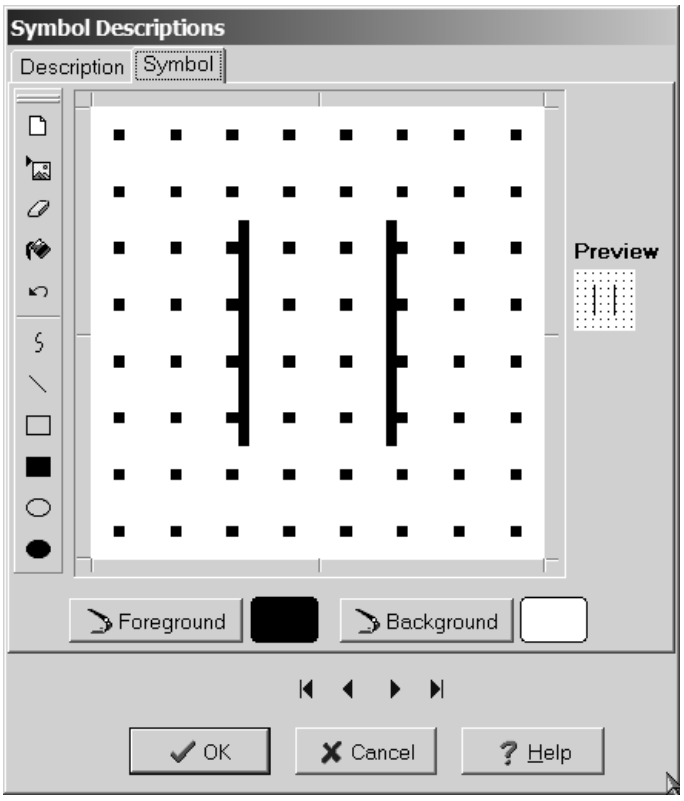
The **Paste** button will paste the text in the clipboard, at the current position of the cursor in the description.

The **Spell Check** button will display the Spell Checker form shown below and will check the spelling in the description. The dictionary used to check the spelling is set in the program Preferences (see Chapter 3). When the Add button is pressed the word will be appended to the custom dictionary.



Symbol Tab

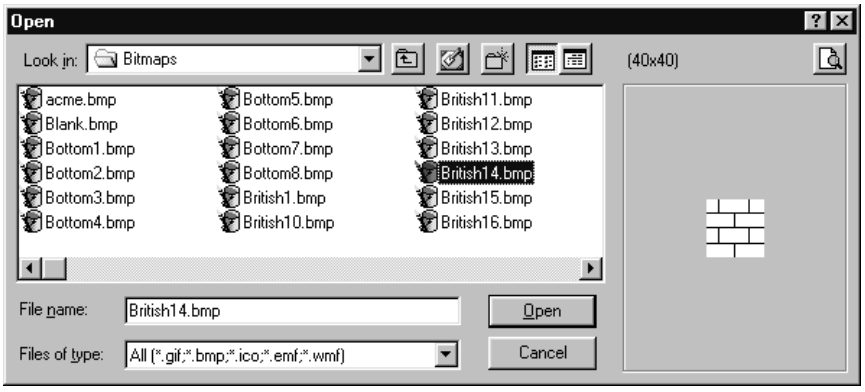
The Symbol tab is used to create and edit the symbols. At the left side of the tab there is a toolbar used to edit the symbol.



The buttons on the toolbar perform the following actions:

The **Clear** button is used to erase the current symbol and provide a blank page.

The **Import Picture** button is used to import a bitmap picture from a file into the current symbol. When this button is pressed, the Open bitmap form on the next page will be displayed. Select the bitmap file to import and then press the Open button.



The **Erase** button is used to delete parts of the symbol. When this button is pressed the cursor will change to an eraser. To erase a part of the symbol, hold the left mouse button down and move the cursor over the area to be erased.

The **Fill** button is used to fill regions of symbols. When this button is pressed the cursor will change to a paint can. To fill an area click inside the region.

The **Undo** button is used to undo the previous edit operation.

The **Curve** button is used to draw a curved line on the symbol. When pressed the cursor will change to a pencil. To draw a curve, hold down the left mouse button and move the mouse. When finished drawing the line, release the mouse button.

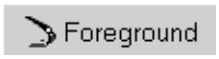
The **Line** button is used to draw a straight line on the symbol. When pressed the cursor will change to a pencil. To draw a line, press and hold down the left mouse button at the start of the line. Move the mouse to the end of the line and release the mouse button.

The **Rectangle** button is used to draw a hollow rectangle on the symbol. When pressed the cursor will change to a cross. To draw a rectangle, press and hold down the left mouse button at the upper left corner of the rectangle. Move the mouse to the lower right corner of the rectangle and release the mouse button.

The **Filled Rectangle** button is used to draw a filled rectangle on the symbol. When pressed the cursor will change to a cross. To draw a rectangle, press and hold down the left mouse button at the upper left corner of the rectangle. Move the mouse to the lower right corner of the rectangle and release the mouse button.

The **Ellipse** button is used to draw a hollow ellipse on the symbol. When pressed the cursor will change to a cross. To draw an ellipse, press and hold down the left mouse button at the upper left corner of the ellipse. Move the mouse to the lower right corner of the ellipse and release the mouse button.

The **Filled Ellipse** button is used to draw a filled ellipse on the symbol. When pressed the cursor will change to a cross. To draw an ellipse, press and hold down the left mouse button at the upper left corner of the ellipse. Move the mouse to the lower right corner of the ellipse and release the mouse button.



The **Foreground** button is used to set the foreground color of the symbol. This will be the default color of the symbol when it is used in a log. The color can also be changed for an individual layer in a log, during the editing of the log.

The **Background** button is used to set the background color of the symbol. This will be the default color of the symbol when it is used in a log. The color can also be changed for an individual layer in a log, during the editing of the log.

New

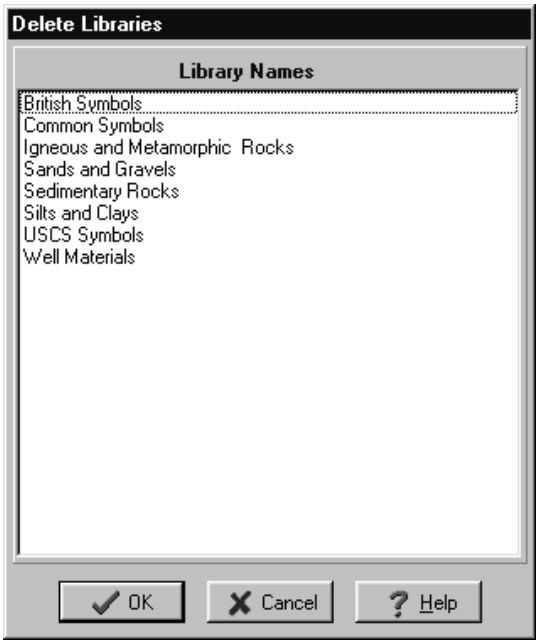
In version 4, the foreground and background colors of the symbol can be set in the library. These are the default colors for the symbols. The colors used in the log can be either these colors or changed within the log.

Saving a Symbol Library

To save a library after it has been edited either select the Save Library menu item of the Symbol Libraries submenu of the File menu or press the Save button on the library toolbar.

Deleting a Symbol Library

To delete a library, select the Delete Library menu item from the Libraries submenu of the File Menu. The Delete Libraries form below will be displayed.

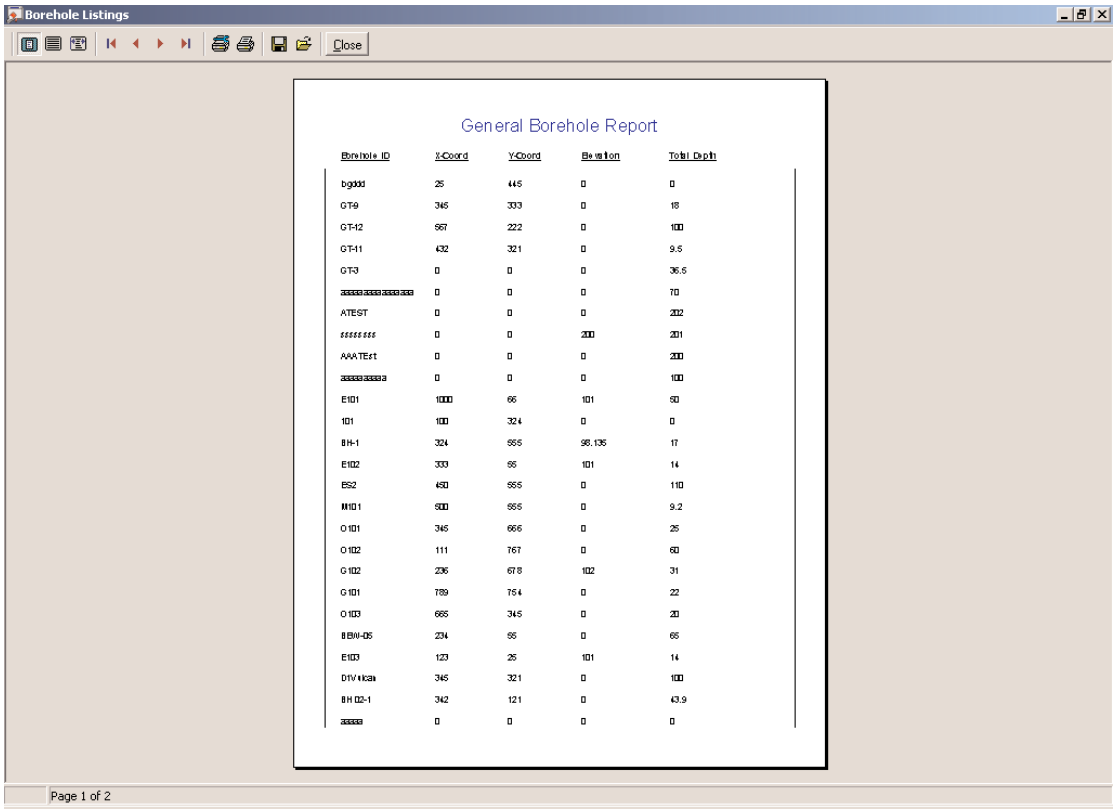


A single library can be selected by clicking on it and pressing the Open button. A range of libraries can be selected by clicking on the beginning of the range, and then holding down the Shift key while clicking on the end of the range. Multiple libraries can be selected, by holding down the CTRL key while clicking on the libraries.

Printing a Symbol Library

To print a library either click the right mouse button and select the Print menu item from the popup menu or press the Print button on the library toolbar.

8. Reports


Borehole Listings
Close
General Borehole Report
Borehole ID
X-Coord
Y-Coord
Elevation
Total Depth
bgddd 25 445 0 0
GT-9 345 333 0 18
GT-12 567 222 0 100
GT-11 432 321 0 9.5
GT-3 0 0 0 36.6
[redacted] 0 0 0 70
ATEST 0 0 0 202
sssssss 0 0 200 201
AAATEst 0 0 0 200
[redacted] 0 0 0 100
E101 1000 66 101 50
101 100 324 0 0
BH-1 324 555 98.135 17
E102 333 55 101 14
ES2 450 555 0 110
MW01 500 555 0 9.2
O101 345 666 0 25
O102 111 767 0 60
G102 236 678 102 31
G101 789 754 0 22
O103 665 345 0 20
BBW-05 234 55 0 65
E103 123 25 101 14
DIVvikaa 345 321 0 100
BH 02-1 342 121 0 43.9
[redacted] 0 0 0 0
Page 1 of 2

8. Reports

In version 4, WinLoG can produce reports on borehole data for a project. The reports can be on all of the boreholes or a subset of the boreholes. A variety of information can be reported, and the format of the reports can be customized.

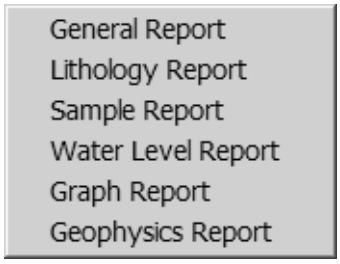
These reports can be used to summarize and provide statistics on the boreholes within a project. The types of statistics and detailed information within the report can be customized and depends on the type of report.

Winlog can generate six different types of reports:

- General Reports
- Lithology Reports
- Sample Reports
- Water Level Reports
- Graph Reports
- Geophysics Reports

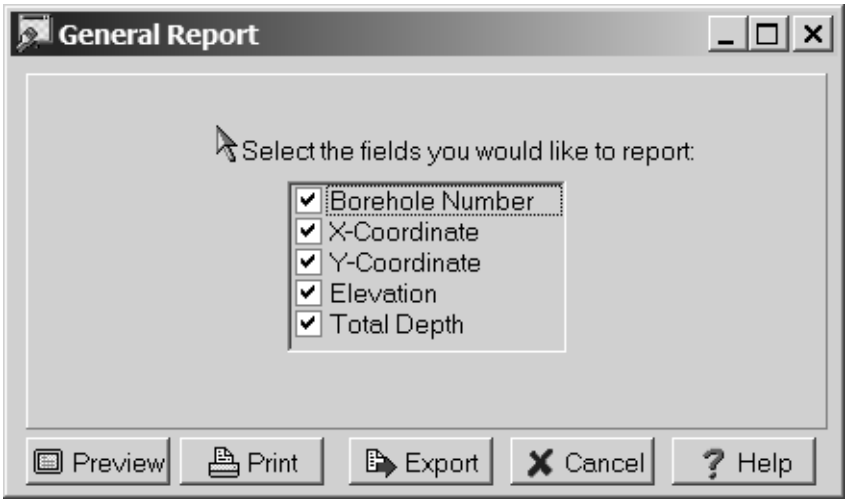
After a report has been generated, you have the option to view, print or export (in 19 different output formats) the reports.

Reports are generated using the Reports menu shown to the right. For this menu to be active a project must be currently open.



General Reports

General reports are used to summarize information contained within the General Borehole Data of each borehole in a project. To generate a general report, select the General Report menu item from the Reports menu. The General Report form below will be displayed. This form allows the user to select from a list of general borehole data fields they would like to include in the report.



The user can select to report the following fields for the currently open project.

Borehole Number: The Borehole Number is the name given to a specific borehole by the user at the time the borehole is entered into winlog.

X-Coordinate: This is the East-West location of the borehole in real grid coordinates of either feet or metres.

Y-Coordinate: This is the North-South location of the borehole in real grid coordinates of either feet or metres.

Elevation: This is the height of the borehole in either feet or metres above mean sea level.

Total Depth: This is the vertical displacement of the borehole in either feet or metres from the collar to the bottom of the borehole.

There are also 5 buttons on the form that are used for the following:

Preview Button: The preview button does an on screen preview of the report. Clicking on the button will display the Print Preview Form discussed in the section below.

Print Button: The Print Button allows the user to output a report directly to the printer.

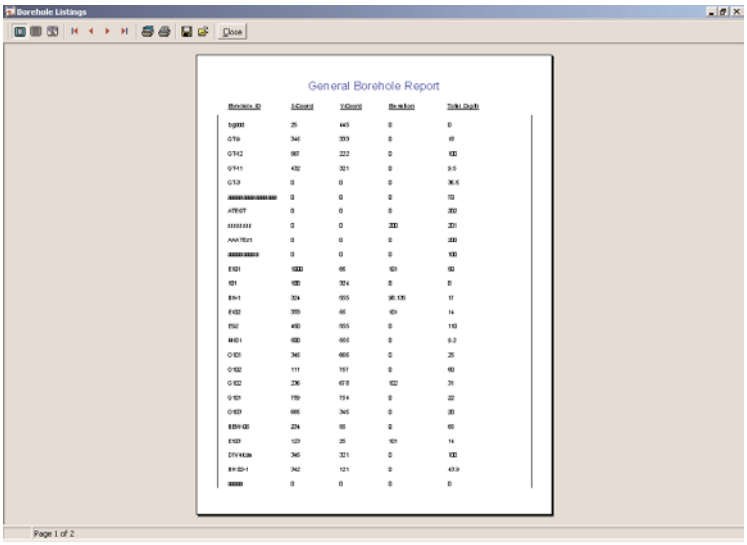
Export Button: The Export Button allows the user to export the report in one of 19 different file formats. Clicking the export button opens up the export wizard which takes the user through an 8-step process in which they may select the file type to export to, and other formatting issues. This feature is discussed in the section below.

Cancel Button: Cancels the report generation without generating a report.

Help Button: Displays additional information about reports.

Previewing a Report

When the Preview button is pressed on the General Reports form, a preview of the report is displayed in the Borehole Listing Preview form below.



At the top of the Borehole Listing Preview form there are several speed buttons that perform the following functions:

The **Zoom to Fit** button zooms out to show the full page on the preview view.

The **Zoom to 100%** button zooms the print preview to its true scale.

The **Zoom to Width** button zooms in to the full page width.

The **First Page** button opens the first page print preview.

The **Previous Page** button opens the previous page print preview.

The **Next Page** button opens the next page print preview.

The **Last Page** button opens the last page print preview.

The **Print Setup** button allows the user to print the project print preview and set the printer properties. Clicking the button opens up a standard print dialog that allows the user to select the print range and the number of copies.

The **Print** button allows the user to send the preview to the printer.

The **Save** button allows the user to save the preview as a Winlog Report file(*.QRP)

The **Open** button allows the user to open a Winlog Report file(*.QRP) as a preview report.

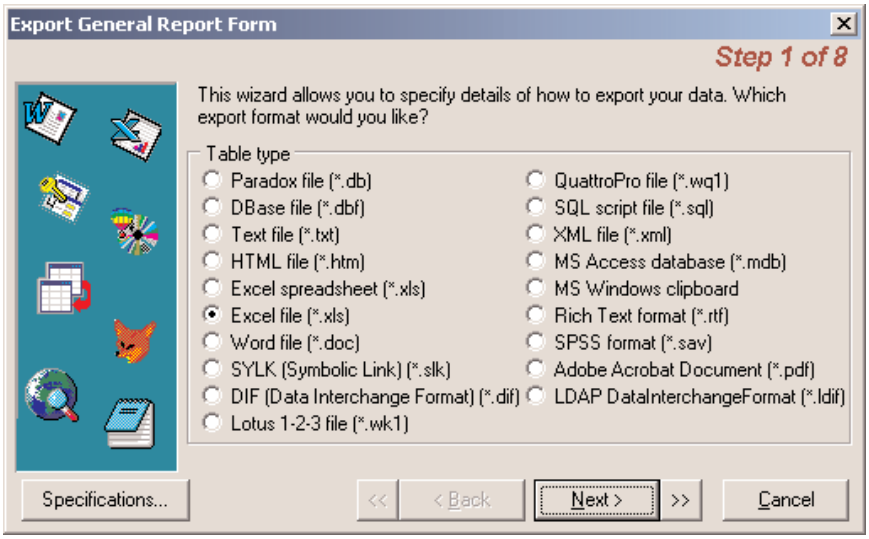
The **Close** button allows the user to close the currently opened Winlog Report preview.

Exporting a Report

The Export button will export the report to one of 19 different file formats. Clicking the Export button opens up the export wizard which takes the user through an 8-step process in which they may select the file type and other formatting issues.

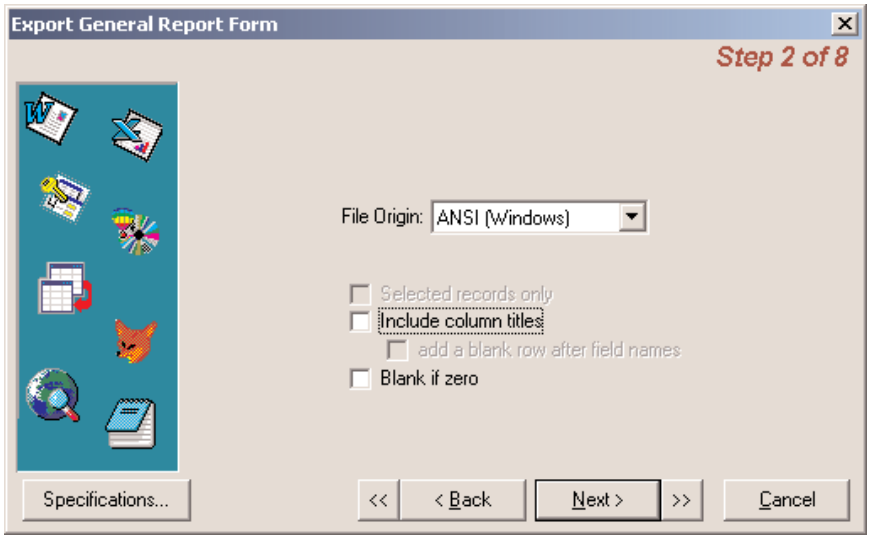
Step 1

Select the file type to export the report to.



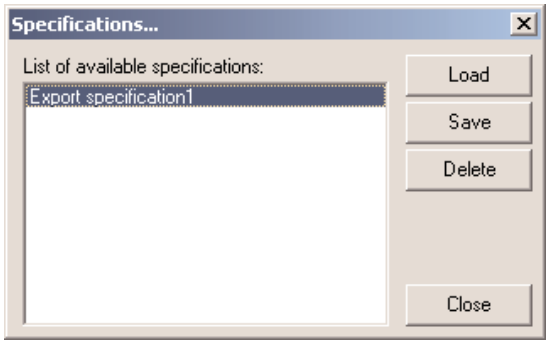
Step 2

Chooses the File origin from either windows or ms-dos. It also allows you to choose to include the column titles, and insert a blank row after the column titles.



Step 3

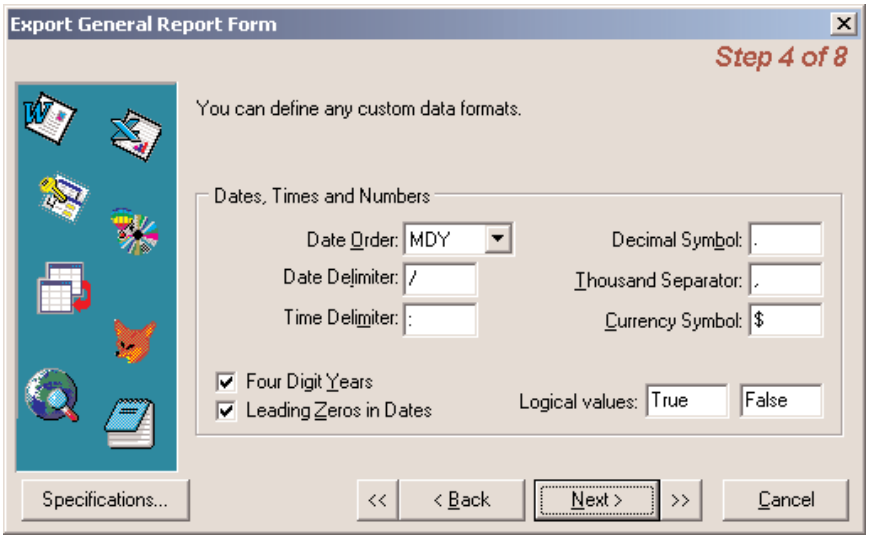
Clicking the **Specifications** button allows the user to load a previous export specification scheme or it also allows the user to save the current export specification scheme.



The user may also Delete previous schemes which are no longer useful to them.

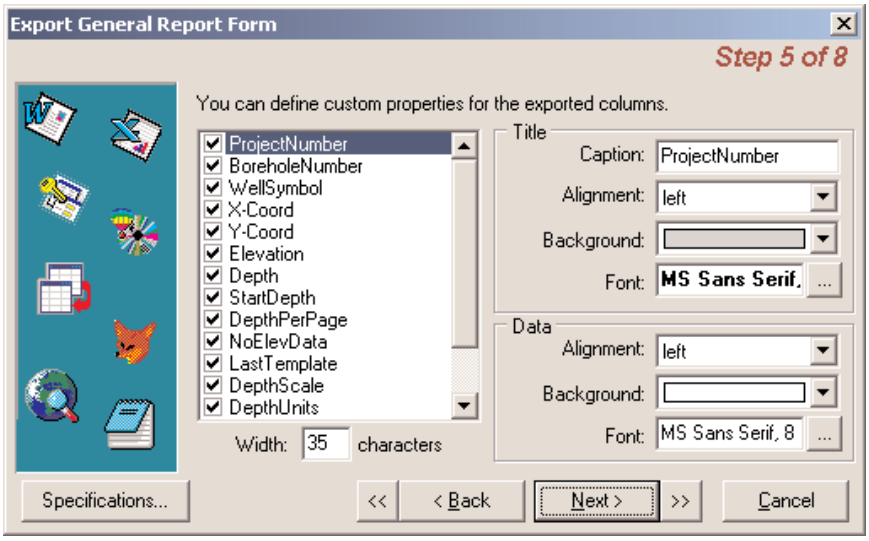
Step 4

In step 4, you choose the dates, times and numbers formats.



Step 5

In step 5, you choose which columns to export. In addition, you can define custom properties for each exported column.

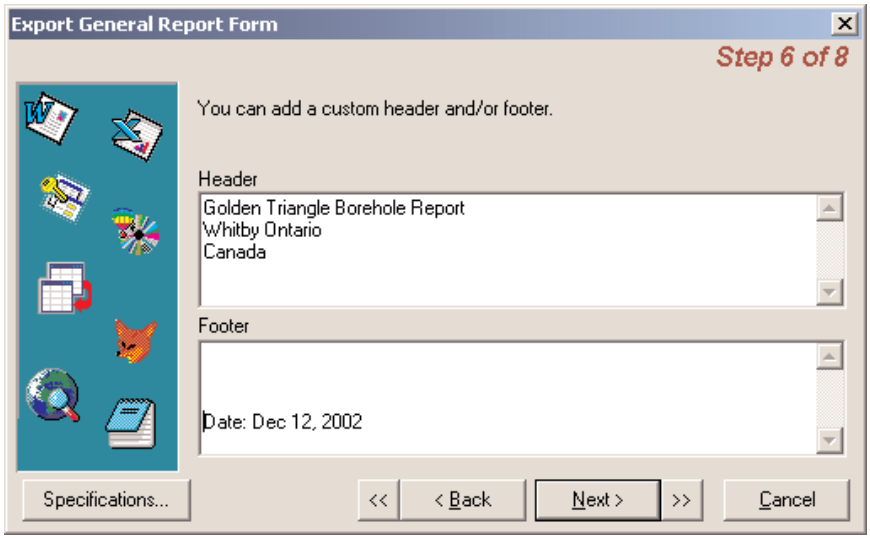


The properties that can be edited from this form are:

* Column Width(in characters)
* Column Title Caption
* Column Title Alignment
* Column Title Background color
* Column Title Font
* Column Data Alignment
* Column Data Background color
* Column Data Font

Step 6

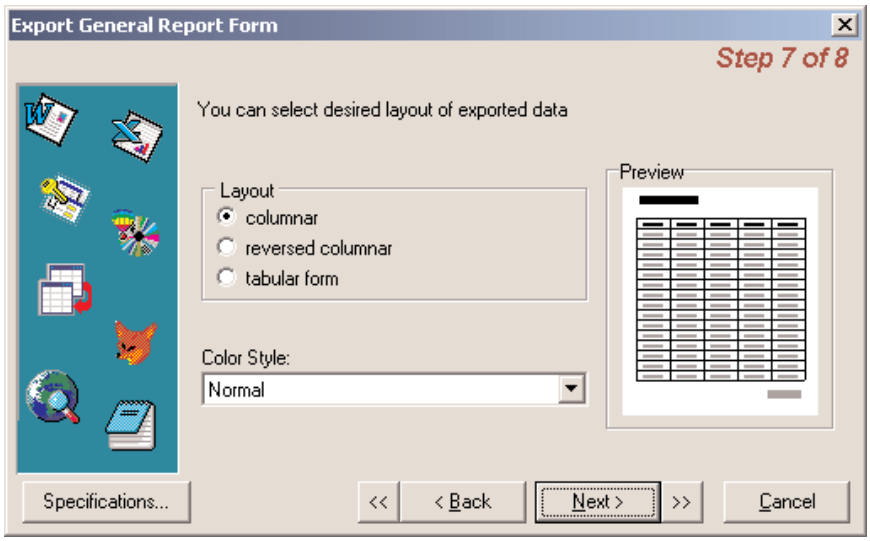
In step 6, you choose whether to add a header and footer section to the output file.



Step 7

In step 7, you choose the desired layout of the exported data. Choose between three different layout types:

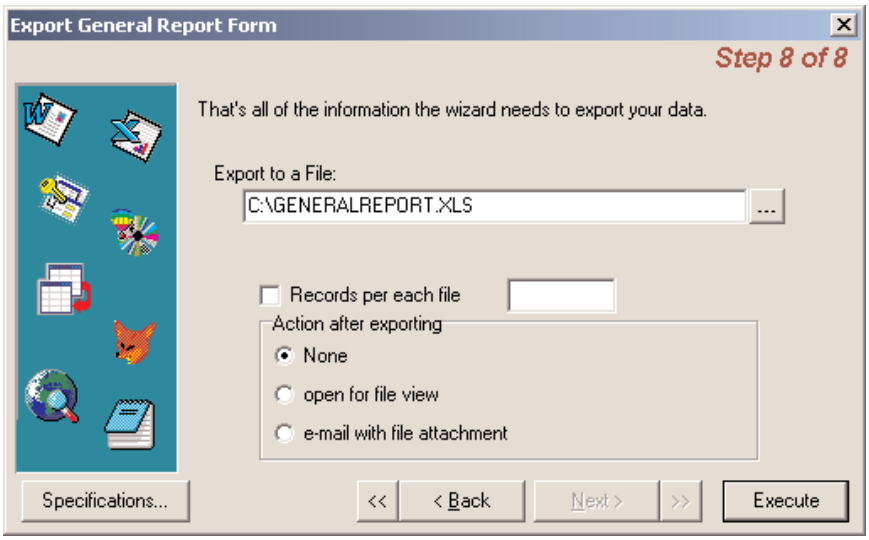
* Columnar
* Reversed Columnar
* Tabular



The user can also select between 12 different color styles.

Step 8

In step 8, you choose a file name to export the data to. You can also select the number of records to include in the exported file.



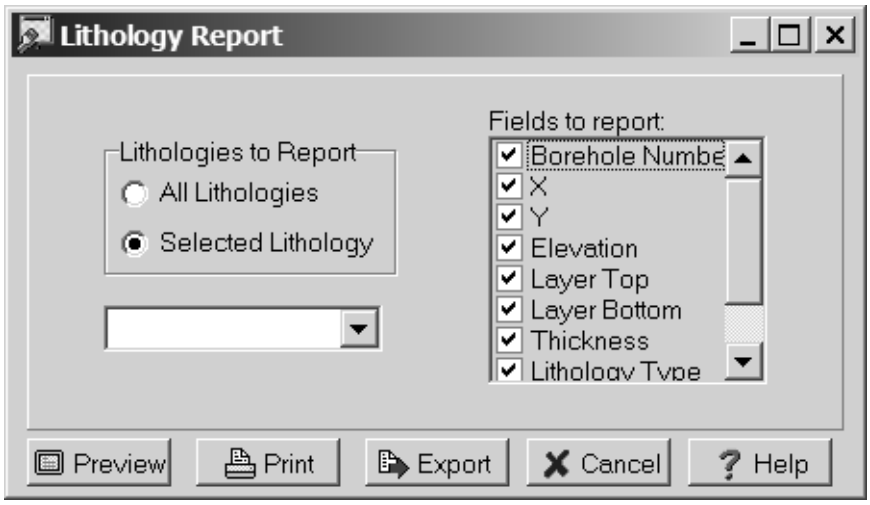
In addition, you can choose one of three options to occur after the exporting has completed.

* None -- do nothing
* Open File for View
* Email with file attachment.

Click **Execute** to export the data to the specified file type and complete the exporting process.

Lithology Reports

Lithology reports are used to summarize lithologic layer data for the boreholes in a project. To generate a lithology report, select the Lithology Report menu item from the Reports menu. The Lithology Report form below will be displayed. This form allows the user to select from a list of fields they would like to include in the report.



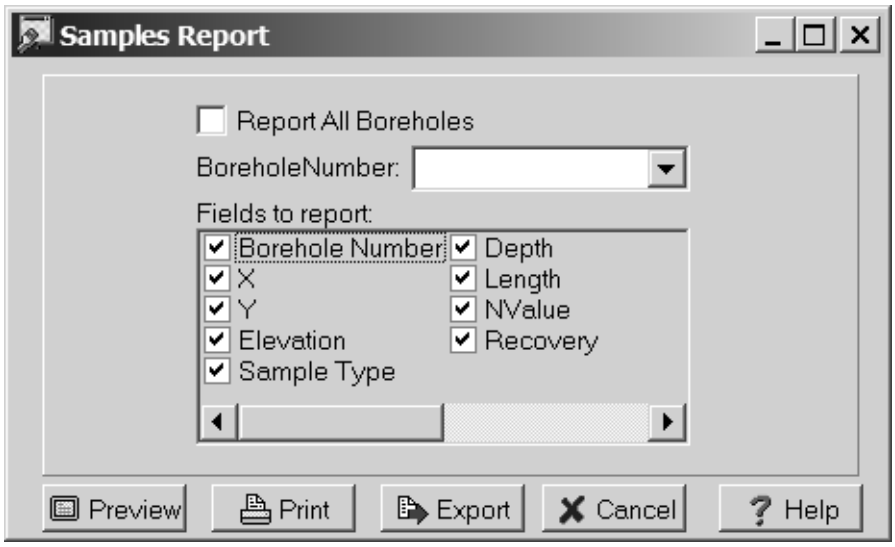
The user can select to report all the lithologies or only one particular lithology. In addition, they can select to report any or all of the fields listed below by selecting the check box to the left of the title.

1) Borehole Number
2) X-Coordinate
3) Y-Coordinate
4) Elevation
5) Layer Top.
6) Layer Bottom
7) Thickness
8) Lithology Type
9) Description

For a detailed explanation of the Print Preview and Export buttons refer to the General Reports section.

Samples Reports

Samples reports are used to summarize sample data for the boreholes in a project. To generate a samples report, select the Samples Report menu item from the Reports menu. The Samples Report Form below will be displayed.



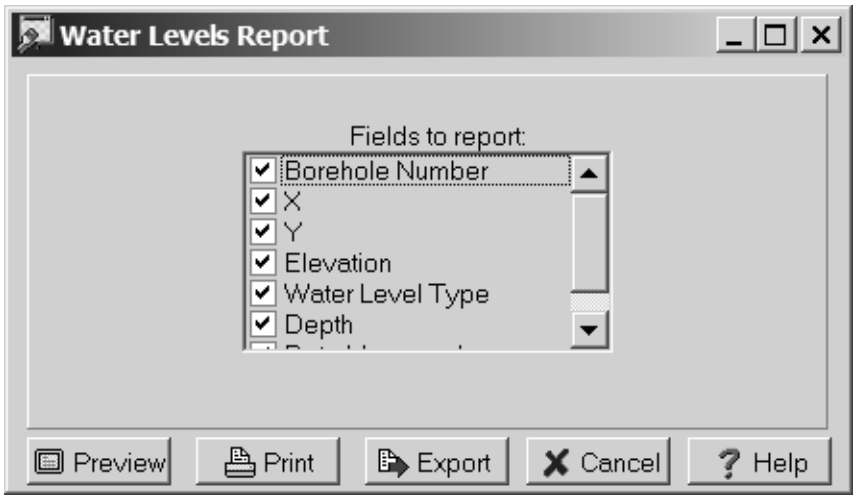
This form allows the user to select from a list of fields they would like to include in the report. The user can select to report the following fields for that Borehole.

1) Borehole Number
2) X-Coordinate
3) Y-Coordinate
4) Elevation
5) Sample Type
6) Depth
7) Length
8) NValue
9) Recovery

For a detailed explanation of the Print Preview and Export buttons refer to the General Reports section.

Water Levels Reports

Water Level reports are used to summarize water level data for the boreholes in a project. To generate a water levels report, select the Water Level Report menu item from the Reports menu. The Water Levels Report Form below will be displayed.



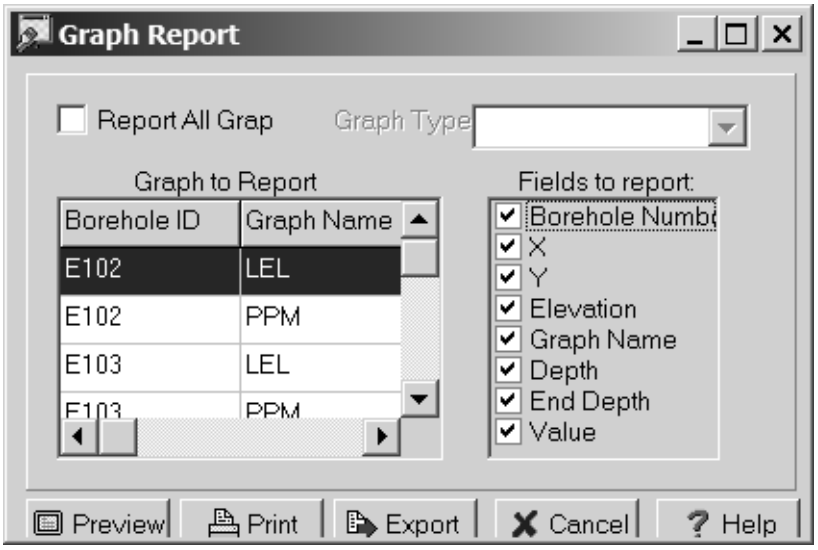
This form allows the user to select from a list of fields they would like to include in the report.

1) Borehole Number
2) X-Coordinate
3) Y-Coordinate
4) Elevation
5) Water Level Type
6) Depth
7) Date Measured

For a detailed explanation of the Print Preview and Export buttons refer to the General Reports section.

Graph Reports

Graph reports are used to summarize graph data for the boreholes in a project. To generate a graph report, select the Graph Report menu item from the Reports menu. The Graph Report Form below will be displayed.



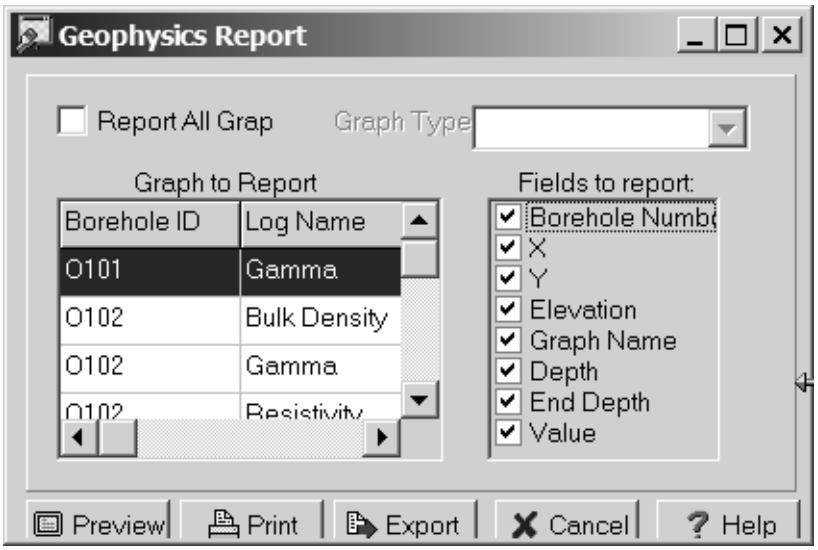
Using this form, select the Graph from the list box of currently available Graphs. The user can then select to report the following fields for the report.

1) Borehole Number
2) X-Coordinate
3) Y-Coordinate
4) Elevation
5) Graph Name
6) Depth
7) End Depth
8) Value

For a detailed explanation of the Print Preview and Export buttons refer to the General Reports section.

Geophysics Reports

Geophysics reports are used to summarize geophysical data for the boreholes in a project. To generate a geophysics report, select the Geophysics Report menu item from the Reports menu. The Geophysics Report Form below will be displayed.

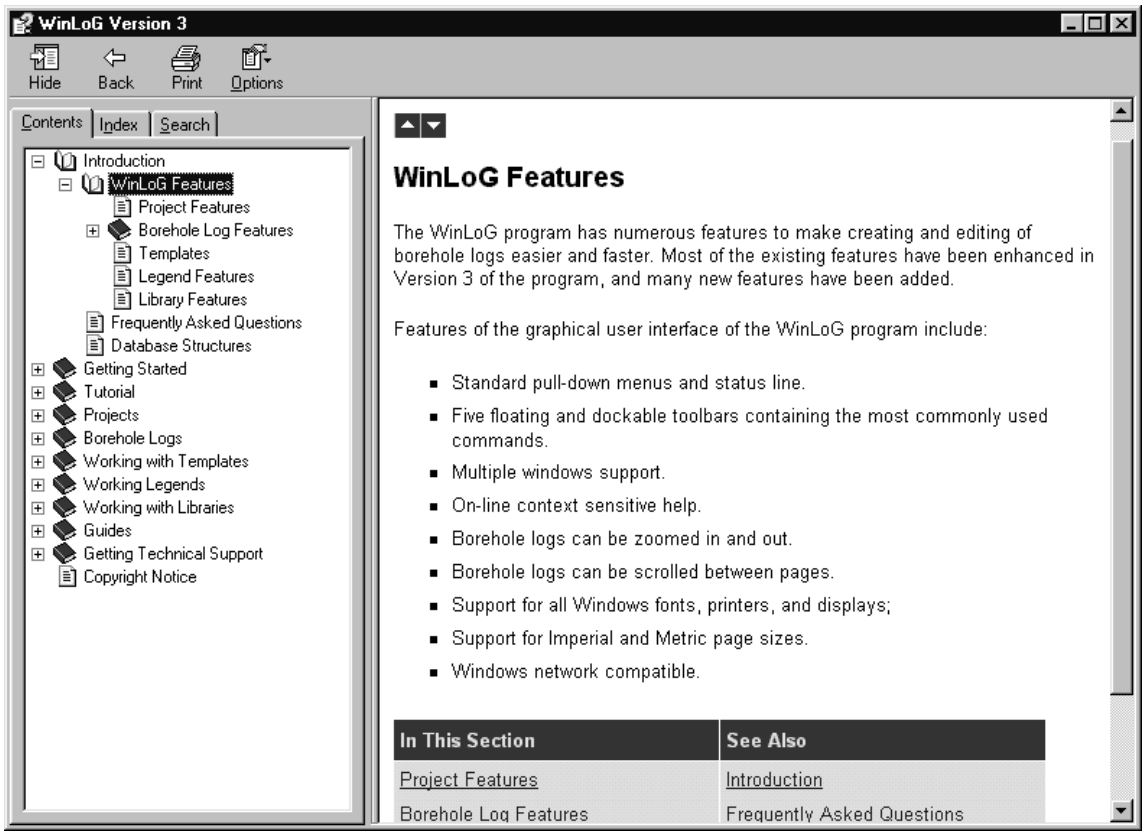


The user first selects the Geophysics Graph from the list box of currently available geophysics data. Then user can select to report the following fields for the geophysics report.

1) Borehole Number
2) X-Coordinate
3) Y-Coordinate
4) Elevation
5) Graph Name
6) Depth
7) End Depth
8) Value

For a detailed explanation of the Print Preview and Export buttons refer to the General Reports section.

9. Help


WinLoG Version 3
Hide
Back
Print
Options
Contents
Index
Search
Introduction
WinLoG Features
Project Features
Borehole Log Features
Templates
Legend Features
Library Features
Frequently Asked Questions
Database Structures
Getting Started
Tutorial
Projects
Borehole Logs
Working with Templates
Working Legends
Working with Libraries
Guides
Getting Technical Support
Copyright Notice
WinLoG Features
The WinLoG program has numerous features to make creating and editing of borehole logs easier and faster. Most of the existing features have been enhanced in Version 3 of the program, and many new features have been added.
Features of the graphical user interface of the WinLoG program include:
Standard pull-down menus and status line.
Five floating and dockable toolbars containing the most commonly used commands.
Multiple windows support.
On-line context sensitive help.
Borehole logs can be zoomed in and out.
Borehole logs can be scrolled between pages.
Support for all Windows fonts, printers, and displays;
Support for Imperial and Metric page sizes.
Windows network compatible.
In This Section
See Also
Project Features
Introduction
Borehole Log Features
Frequently Asked Questions

9. Help

WinLoG uses the latest type of help system for Microsoft Windows called HTML Help. This help system uses a similar style of display as Internet Explorer.

The Help System can be used to find information on-line rather than by using this manual. Both sources will provide the same information, but are organized somewhat differently. Help will appear in a separate window with its own menu bar and controls as shown below.

This chapter describes how to:

1. Display help

2. Use help

3. Get technical support

4. Upgrade WinLoG

These tasks can be performed using menu commands on the Help menu shown on the previous page. The Transfer Registration menu item is explained in Chapter 1 Getting Started.

Displaying Help

There are several ways to access the Help System, these are:

- Press the Help button. To display the help contents at any time press the help button on the Toolbar.
- Click a Help button in a form. For more information on using a particular form click the Help button.
- Choose a command from the Help menu. The Help menu offers several options:
  - Contents displays the same Help Contents that appear when you press F1 with no commands highlighted.
  - Search displays the Search dialog box and a list of keywords you can use to find topics.
  - About WinFence gives information about the program, including the 3-digit version number required by technical support.

Using Help

You can move back and forth between topics or search through the entire help system for the topic you want. Topics that are underlined can be displayed by clicking on them, and topics that have dotted underlines can have their definition displayed by clicking on them.

The tabs on the Help form are used for the following:

- **Contents** displays the complete Table of Contents of the Help System.
- **Index** is used to look for help topics listed by keyword.
- **Search** can be used to search for a specific help topic by one or more keywords.

The buttons at the top of the Help form are used for the following:

- **Hide** is used to hide the tabs on the left side of the form.
- **Back** displays the previous help topic, if any.
- **Print** is used to print the current help topic.
- **Options** is used to change the preferences for the Help system.

Getting Technical Support

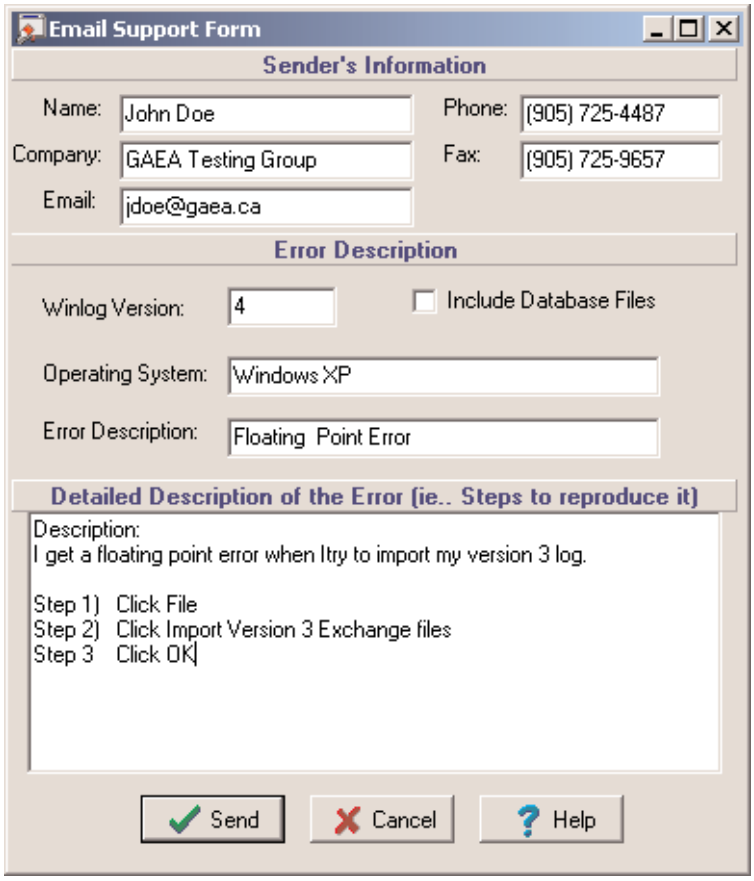
GAEA offers a variety of services to help you with your questions and problems. You will be automatically registered when you obtain an unlock code for the program. Free technical support to registered users includes assistance in the use of the software and in getting any bugs you may find in the software fixed.

There several ways you may contact technical support as discussed below. In version 4 an automated technical support option has been added. This is our preferred method since it provides us with the maximum amount of information to assist you.

Automated Technical Support

In version 4 of WinLoG, you can now send logs, templates, and databases to GAEA for technical support automatically within the program without having to first save them as exchange files.

To send the information to technical support select the Email Current Log/Template menu item from the Help menu. The Email Support form below will then be displayed.



The following information can be entered on this form:

Name: Your name.

Company: Your companies name.

Email: Your email address.

Phone: Your phone number.

Fax: Your fax number.

WinLoG Version: The version of WinLoG you are using. This should be automatically filled in by the program.

Include Database Files: The include Database Files check box allows you to include the database files you are currently working on. However, it should only be used if absolutely necessary since the database files are very large and many email servers are unable to send them.

Operating System: Your computer's operating system (i.e Windows 98, 2000, NT, XP, etc).

Error Description: A short description of your error. For example, the user might get a floating point error and put that name in the description text box.

Detailed Description of Error: Enter a detailed description of the error including what you were doing when you got the error, what menu items you used, what data you were entering, and whether the problem occurs all of the time or only occasionally.

The **Send** button will email the information to GAEA support when you are finished filling out the form.

Other Methods to Contact Technical Support

To expedite support services, we prefer electronic communications, through email or the Internet. These communications minimize the possibility for any mistakes, and allow us to better track your request. You can email technical support by selecting the Email Technical Support menu item from the Help menu. This menu item will create an email message using your default email program.

To connect to GAEA's Internet site, select the GAEA's Web Site menu item from the Help menu.

Below are the various methods to contact technical support:

Service	Contact Method
Web Site	http:\\www.gaea.ca
E-mail	support@gaea.ca
Phone	(905) 666-7527
FAX	(905) 666-3744
Mail	GAEA Technologies Ltd. 87 Garden Street Whitby, Ontario Canada L1N 9E7

After receiving your communication, GAEA will respond promptly with either the solution to the problem or a schedule for solving the problem.

Before Contacting GAEA

Before contacting technical support, we suggest you try the following to help us resolve your problem.

- Determine if the problem is specific to the cross-section you are creating. Does it occur with other templates or other cross-section?
- Does the problem occur every time or intermittently?
- If you have another PC, does the problem occur on it?

Information to Provide

When contacting GAEA, please include or have the following information available.

- The 3-digit version of the WinLoG program you are using. This can be obtained from the About form on the Help menu.
- A description of the problem to help us duplicate the problem. Including any error messages.
- Copies of the borehole logs and template files. These can be exported in Exchange format and then emailed to us.
- The type and model of your PC.
- The Windows version you are using.

A

Database Structure

Database Design

The WinLoG program has been designed around the concept of projects. A schematic of the database structure is shown on the next page followed by a detailed description of all the data fields. This data storage method allows for the expansion, archival, and network administration of a large number of projects.

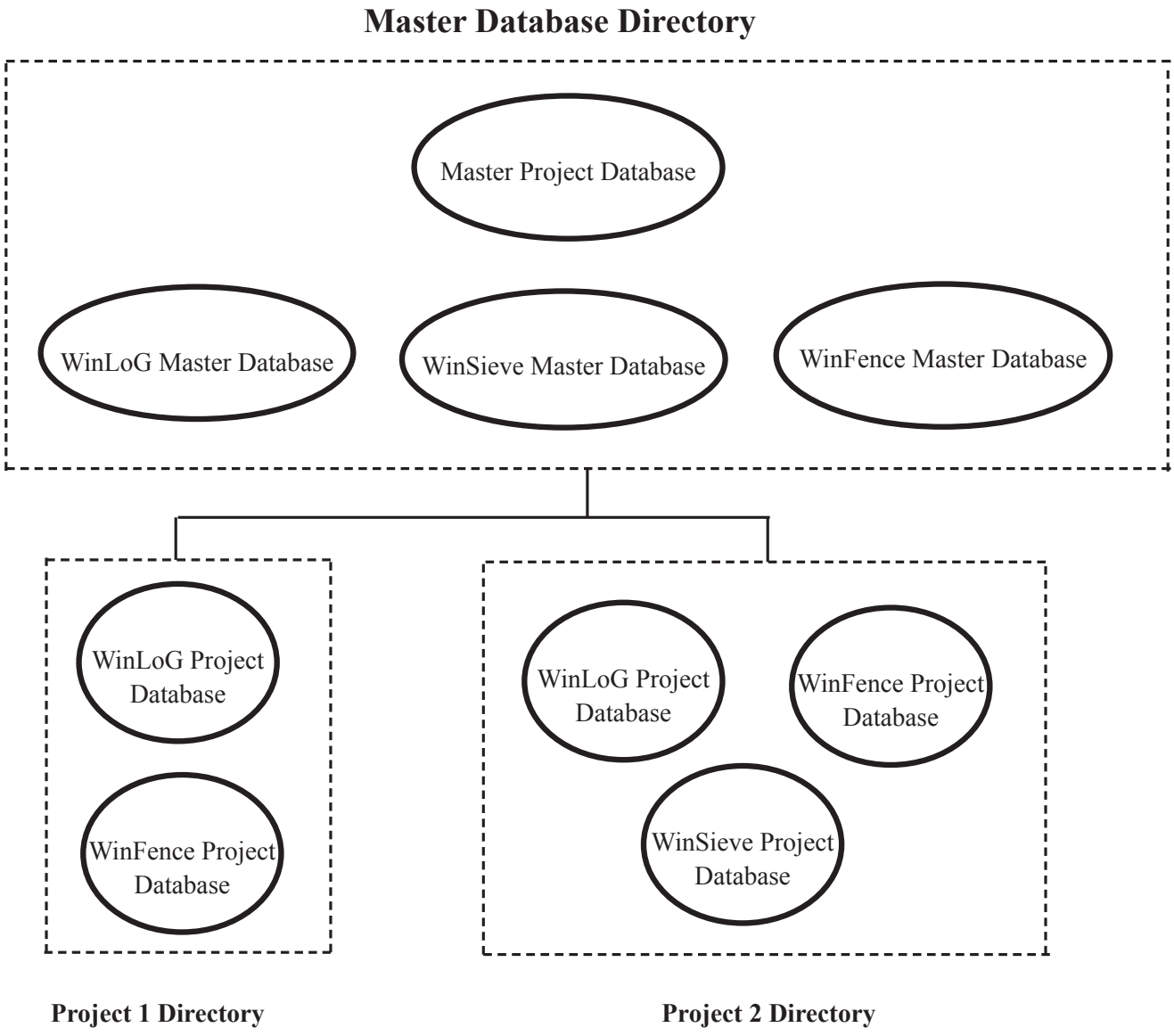
Using this method a separate Microsoft Access 97 database is used to store each project for each application. Each project is stored in a separate directory, which can be on the same computer or spread across a network. The number of databases for each project will depend upon the applications being used for that project. If for example, the WinLoG and WinFence programs are being used with the project, there will be two project databases

The names of the project databases are the project number combined with the application suffix. For example, if the project number were "A980205" then the project database name of the WinLoG data would be "A980205winlog.mdb". Typically, this project would be stored in the subdirectory "\A980205".

A master project database, also in Microsoft Access 97 format, is used to keep track of the projects and their locations on the network. This master project database is also used to store data (such as symbol libraries and text macros) that is common to all projects and applications. The name of the project master database is "gaeaprojects.mdb". The database is stored in a directory specified by the user when the program is installed.

In addition to the master project database, separate application master databases are used to store data that is common to all projects but specific to the application. A WinLoG master database is used to store templates which can be accessed by all projects. The name of this database is "winlog.mdb". All of the application master databases are stored in the same directory as the master project database.

If the master databases are moved, the "Master Database Directory" in the program preferences must be changed to reflect the new directory.


Master Database Directory
Master Project Database
WinLoG Master Database
WinSieve Master Database
WinFence Master Database
WinLoG Project Database
WinFence Project Database
WinLoG Project Database
WinFence Project Database
WinSieve Project Database
Project 1 Directory
Project 2 Directory

The Master Project database consists of the following four tables:

Table Name	Field Name	Data Type	Field Size	Key
Projects	ProjectNumber	Text	100	*
	1. ProjectName	Text	255	
	Directory	Text	255	
	Location	Text	255	
	ReferenceGrid	Text	255	

Table Name	Field Name	Data Type	Field Size	Key
LibraryDescriptions	Name	Text	100	*
	Number	Integer		*
	SymbolName	Text	40	
	Description	Memo		

Table Name	Field Name	Data Type	Field Size	Key
1. LithologicLibraries	Pref	Text	100	*
	Name	Text	255	

Table Name	Field Name	Data Type	Field Size	Key
LithologyMacros	Number	Long Integer		*
	Name	Text	100	*
	Text	Memo		
	Library	Text	255	
	Code	Integer		

The WinLoG Project database consists of the following tables:

Table Name	Field Name	Data Type	Field Size	Key
1. Borehole	ProjectNumber	Text	100	*
	BoreholeNumber	Text	100	*
	WellSymbol	Integer		
	X-Coord	Double		
	Y-Coord	Double		
	Elevation	Double		
	Depth	Double		
	StartDepth	Double		
	DepthPerPage	Double		
	NoElevData	Yes/No		
	LastTemplate	Text	255	

Table Name	Field Name	Data Type	Field Size	Key
Borehole_Text	ProjectNumber	Text	100	*
	BoreholeNumber	Text	100	*
	Number	Integer		*
	Type	Text	100	
	1. Value	Text	255	
	Checkbox	Yes/No		
	Checked	Yes/No		

Table Name	Field Name	Data Type	Field Size	Key
Borehole_Memo	ProjectNumber	Text	100	*
	BoreholeNumber	Text	100	*
	Number	Integer		*
	Type	Text	100	
	Value	Memo		

Table Name	Field Name	Data Type	Field Size	Key
Samples	ProjectNumber	Text	100	*
	1. BoreholeNumber	Text	100	*
	Number	Integer		*
	Depth	Double		
	SampleNumber	Text	255	
	Type	Text	255	
	NValue	Text	255	
	Recovery	Text	255	
	Northing	Double		
	Easting	Double		
	Length	Double		
	TypeCode	Integer		
	LineStyle	Integer		
	LineWidth	Integer		
	LineColor	Long Integer		
	FGColor	Long Integer		
	BGColor	Long Integer		

Table Name	Field Name	Data Type	Field Size	Key
Sample_Text	ProjectNumber	Text	100	*
	1. BoreholeNumber	Text	100	*
	Number	Integer		*
	Depth	Double		
	Type	Text	255	
	Value	Text	255	

Table Name	Field Name	Data Type	Field Size	Key
Lithology	1. ProjectNumber	Text	100	*
	BoreholeNumber	Text	100	*
	Number	Integer		*
	TopDepth	Double		
	BottomDepth	Double		
	Name	Text	255	
	Description	Memo		
	Classification	Text	100	
	VertAlign	Integer		
	HorzAlign	Integer		
	Line Style	Integer		
	Line Width	Integer		
	Line Color	Long Integer		
	StratumCode	Integer		
	StratumLibrary	Text	255	
	StratumCode2	Integer		
	StratumLibrary2	Text	255	
	ContactAngle	Double		
	FillSize	Double		
	FillSize2	Double		
	StratumFGColor	Long Integer		
	StratumBGColor	Long Integer		
	StratumFGColor2	Long Integer		
	StratumBGColor2	Long Integer		
	StratumLineStyle	Integer		
	StratumLineWidth	Integer		
	StratumLineColor	Integer		

Table Name	Field Name	Data Type	Field Size	Key
WaterContent	ProjectNumber	Text	100	*
	BoreholeNumber	Text	100	*
	Number	Integer		*
	Depth	Double		
	WaterContent	Double		
	PlasticLimit	Double		
	LiquidLimit	Double		

Table Name	Field Name	Data Type	Field Size	Key
1. Remarks	ProjectNumber	Text	100	*
	BoreholeNumber	Text	100	*
	RemarkType	Text	100	*

Table Name	Field Name	Data Type	Field Size	Key
Remarks_Text	ProjectNumber	Text	100	*
	1. BoreholeNumber	Text	100	*
	RemarkType	Text	100	*
	Number	Integer		*
	Depth	Double		
	Remark	Text	255	

Table Name	Field Name	Data Type	Field Size	Key
Remarks_Memo	ProjectNumber	Text	100	*
	BoreholeNumber	Text	100	*
	RemarkType	Text	100	*
	Number	Integer		*
	Depth	Double		
	Remark	Memo		

Table Name	Field Name	Data Type	Field Size	Key
1. Remarks_Lines	ProjectNumber	Text	100	*
	BoreholeNumber	Text	100	*
	RemarkType	Text	100	*
	Number	Integer		*
	Depth	Double		
	Style	Integer		
	Color	Long Integer		
	Width	Integer		
	Offset	Integer		
	ColumnWidth	Integer		

Table Name	Field Name	Data Type	Field Size	Key
Graph_Data	ProjectNumber	Text	100	*
	1. BoreholeNumber	Text	100	*
	GraphName	Text	100	*
	Number	Integer		*
	Depth	Double		
	EndDepth	Double		
	Value	Double		
	GraphType	Integer		

Table Name	Field Name	Data Type	Field Size	Key
Geophysics	ProjectNumber	Text	100	*
	BoreholeNumber	Text	100	*
	LogName	Text	255	*
	LogType	Text	255	
	FileName	Text	255	
	FileType	Text	255	
	FormatCode	Integer		
	nHeader	Integer		
	SampleInterval	Double		
	DepthColumn	Integer		
	SampleColumn	Integer		
	nSample	Integer		
	StartDepth	Double		
	OffsetDepth	Double		
	ResampleStart	Double		
	ResampleEnd	Double		
	ResampleIncr	Double		

Table Name	Field Name	Data Type	Field Size	Key
Geophysic Data	ProjectNumber	Text	100	*
	BoreholeNumber	Text	100	*
	1. LogName	Text	255	*
	Number	Integer		*
	Depth	Double		
	Value	Double		

Table Name	Field Name	Data Type	Field Size	Key
WellType2	ProjectNumber	Text	100	*
	BoreholeNumber	Text	100	*
	WellNumber	Text	100	*
	Number	Integer		*
	IntervalTop	Double		
	IntervalLength	Double		
	BoringDiameter	Double		
	PipeDiameter	Double		
	PipeCode	Integer		
	TopFittingCode	Integer		
	BottomFittingCode	Integer		
	PackingCode	Integer		
	FGColor	Long Integer		
	BGColor	Long Integer		

Table Name	Field Name	Data Type	Field Size	Key
WellType2_WaterLevels	ProjectNumber	Text	100	*
	BoreholeNumber	Text	100	*
	WellNumber	Text	100	*
	WaterDepth	Double		
	WaterSymbol	Integer		
	1. InputType	Integer		
	WellType	Integer		

Table Name	Field Name	Data Type	Field Size	Key
WellType3	ProjectNumber	Text	100	*
	BoreholeNumber	Text	100	*
	1. WellNumber	Text	100	*
	WellDiameter	Double		
	WellWidth	Integer		
	WellOffset	Integer		
	SealBorderColor	Long Integer		
	SealBorderWidth	Integer		
	SealBorderStyle	Integer		

Table Name	Field Name	Data Type	Field Size	Key
WellType3_Components	ProjectNumber	Text	100	*
	BoreholeNumber	Text	100	*
	WellNumber	Text	100	*
	1. ComponentNumber	Integer		*
	Component	Text	100	
	StartDepth	Double		
	EndDepth	Double		
	Offset	Double		
	InnerDiameter	Double		
	OuterDiameter	Double		
	Symbol	Integer		
	Library	Text	255	
	FGColor	Long Integer		
	BGColor	Long Integer		
	FillSize	Integer		
	VertLines	Integer		
	HorzLines	Integer		

Table Name	Field Name	Data Type	Field Size	Key
WellType3_WaterLevels	ProjectNumber	Text	100	*
	BoreholeNumber	Text	100	*
	WellNumber	Text	100	*
	WaterLevelNumber	Integer		*
	Depth	Double		
	Offset	Double		
	Text	Text	255	
	Symbol	Integer		
	FGColor	Long Integer		
	PenWidth	Integer		
	Size	Integer		

Table Name	Field Name	Data Type	Field Size	Key
WellType3_Annotations	1. ProjectNumber	Text	100	*
	BoreholeNumber	Text	100	*
	WellNumber	Text	100	*
	AnnotationNumber	Integer		*
	Text	Text	255	
	StartDepth	Double		
	EndDepth	Double		
	TextOffset	Double		
	Offset	Double		
	Side	Integer		
	Orientation	Text	100	
	Symbol	Integer		
	SymbolSize	Integer		
	LineColor	Long Integer		
	LineWidth	Integer		
	LineStyle	Integer		

Table Name	Field Name	Data Type	Field Size	Key
CoreLog	1. ProjectNumber	Text	100	*
	BoreholeNumber	Text	100	*
	Number	Integer		*
	TopDepth	Double		
	BottomDepth	Double		
	StratumCode	Integer		
	StratumLibrary	Text	255	
	FillSize	Double		
	StratumFGColor	Long Integer		
	StratumBGColor	Long Integer		
	StratumLineStyle	Integer		
	StratumLineWidth	Integer		
	StratumLineColor	Integer		

Table Name	Field Name	Data Type	Field Size	Key
Paragraphs	ProjectNumber	Text	100	*
	BoreholeNumber	Text	100	*
	ParagraphNumber	Integer		*
	Text	Memo		
	Sheet	Integer		
	Left	Integer		
	Right	Integer		
	Top	Integer		
	Bottom	Integer		
	Frame	Yes/No		
	FrameWidth	Integer		
	TextColor	Long Integer		
	BGColor	Long Integer		
	FrameColor	Long Integer		

Table Name	Field Name	Data Type	Field Size	Key
Bitmaps	1. ProjectNumber	Text	100	*
	BoreholeNumber	Text	100	*
	BitmapNumber	Integer		*
	FileName	Text	255	
	Top	Integer		
	Bottom	Integer		
	Left	Integer		
	Right	Integer		
	Sheet	Integer		
	X	Integer		
	Y	Integer		
	Stretch	Yes/No		
	AspectRatio	Yes/No		

Table Name	Field Name	Data Type	Field Size	Key
Lines	ProjectNumber	Text	100	*
	1. BoreholeNumber	Text	100	*
	LineNumber	Integer		*
	Sheet	Integer		
	X1	Double		
	Y1	Double		
	X2	Double		
	Y2	Double		
	Width	Integer		
	Style	Integer		
	Color	Long Integer		
	Arrow	Yes/No		
	ArrowPosition	Integer		
	ArrowSize	Integer		

Table Name	Field Name	Data Type	Field Size	Key
Rectangles	1. ProjectNumber	Text	100	*
	BoreholeNumber	Text	100	*
	RectangleNumber	Integer		*
	Sheet	Integer		
	Left	Integer		
	Right	Integer		
	Top	Integer		
	Bottom	Integer		
	Color	Long Integer		
	Style	Integer		
	Width	Integer		
	FillColor	Long Integer		

Table Name	Field Name	Data Type	Field Size	Key
LogTable	ProjectNumber	Text	100	*
	BoreholeNumber	Text	100	*
	TableNumber	Integer		*
	Sheet	Integer		
	Left	Double		
	Right	Double		
	Top	Double		
	Bottom	Double		
	BorderWidth	Long Integer		
	BorderStyle	Long Integer		
	BorderColor	Long Integer		
	InnerWidth	Long Integer		
	InnerStyle	Long Integer		
	InnerColor	Long Integer		
	FillColor	Long Integer		
	FixedColor	Long Integer		
	NRows	Long Integer		
	NFixedRows	Long Integer		
	NCols	Long Integer		
	NFixedCols	Long Integer		
	HeaderFontName	Text	255	
	HeaderFontSize	Long Integer		
	HeaderFontFont	Long Integer		
	HeaderFontColor	Long Integer		
	ValueFontName	Text	255	
	ValueFontSize	Long Integer		
	ValueFontFont	Long Integer		
	ValueFontColor	Long Integer		
	VertAlign	Long Integer		
	HorzAlign	Long Integer		
	ValueVertAlign	Long Integer		
	ValueHorzAlign	Long Integer		

Table Name	Field Name	Data Type	Field Size	Key
LogTableHeaders	ProjectNumber	Text	100	*
	BoreholeNumber	Text	100	*
	TableNumber	Long Integer		*
	HeaderNumber	Long Integer		*
	Header	Text	200	
	HRow	Long Integer		
	HCol	Long Integer		

Table Name	Field Name	Data Type	Field Size	Key
MapBitmaps	ProjectNumber	Text	100	*
	BitmapNumber	Long Integer		*
	FileName	Text	200	
	Top	Double		
	Bottom	Double		
	Left	Double		
	Right	Double		
	X	Double		
	Y	Double		
	Stretch	Long Integer		
	AspectRatio	Long Integer		

Table Name	Field Name	Data Type	Field Size	Key
MapEllipses	ProjectNumber	Text	100	*
	EllipseNumber	Long Integer		*
	Top	Double		
	Bottom	Double		
	Left	Double		
	Right	Double		
	Width	Long Integer		
	Style	Long Integer		
	Color	Long Integer		
	FillColor	Long Integer		

Table Name	Field Name	Data Type	Field Size	Key
MapRectangles	ProjectNumber	Text	100	*
	RectangleNumber	Long Integer		*
	Left	Double		
	Right	Double		
	Top	Double		
	Bottom	Double		
	Width	Long Integer		
	Style	Long Integer		
	Color	Long Integer		
	FillColor	Long Integer		

Table Name	Field Name	Data Type	Field Size	Key
PercentSplits	ProjectNumber	Text	100	*
	BoreholeNumber	Long Integer		*
	RowNumber	Long Integer		
	StartDepth	Double		
	EndDepth	Double		
	Value1	Double		
	Value2	Double		
	Value3	Double		
	Value4	Double		
	Value5	Double		
	Value6	Double		

Table Name	Field Name	Data Type	Field Size	Key
Polygon	ProjectNumber	Text	100	*
	PolyNumber	Long Integer		*
	pIndex	Long Integer		*
	X	Double		
	Y	Double		
	Width	Long Integer		
	Style	Long Integer		
	Color	Long Integer		

Table Name	Field Name	Data Type	Field Size	Key
MapLines	ProjectNumber	Text	100	*
	LineNumber	Long Integer		*
	Left	Double		
	Right	Double		
	Top	Double		
	Bottom	Double		
	Width	Long Integer		
	Style	Long Integer		
	Color	Long Integer		
	Arrow	Long Integer		
	ArrowPosition	Long Integer		
	ArrowSize	Long Integer		
	FillColor	Long Integer		

Table Name	Field Name	Data Type	Field Size	Key
MapNorthArrows	ProjectNumber	Text	100	*
	ArrowNumber	Long Integer		*
	FileName	Text	200	
	Left	Double		
	Right	Double		
	Top	Double		
	Bottom	Double		
	X	Double		
	Y	Double		
	Stretch	Long Integer		
	AspectRatio	Long Integer		

Table Name	Field Name	Data Type	Field Size	Key
MapParagraphs	ProjectNumber	Text	100	*
	ParaNumber	Long Integer		*
	Frame	Long Integer	200	
	pText	Memo		
	Left	Double		
	Right	Double		
	Top	Double		
	Bottom	Double		
	bkgdColor	Long Integer		
	frameColor	Long Integer		
	frameWidth	Long Integer		

Table Name	Field Name	Data Type	Field Size	Key
TemTables	ProjectNumber	Text	100	*
	BoreholeNumber	Long Integer		*
	Page	Long Integer		*
	TableNumber	Long Integer		*
	NRows	Long Integer		
	NCols	Long Integer		
	NFixedRows	Long Integer		
	NFixCols	Long Integer		
	VertAlign	Long Integer		
	HorzAlign	Long Integer		
	ValueFontName	Long Integer		
	ValueFontStyle	Long Integer		
	ValueFontColor	Long Integer		
	LineStyle	Long Integer		

Table Name	Field Name	Data Type	Field Size	Key
TemTablesValues	ProjectNumber	Text	100	*
	BoreholeNumber	Long Integer		*
	Page	Long Integer		*
	TableNumber	Long Integer		*
	ValueNumber	Long Integer		*
	TValue	Text	255	
	HRow	Long Integer		
	HCol	Long Integer		

B Installation Files

During the installation of the WinLoG program, the files listed below will be installed. This listing is provided to enable network administrators to determine what files are present and where. It is not recommended that these files be moved or deleted. To uninstall the WinLoG program, use the Add/Remove Programs function in the Control Panel (see Chapter 1).

File Name	Directory	Description
WinLoG.exe	<WinLoG>	WinLoG executable program
Transfer.exe	<WinLoG>	Registration transfer program
WinlogAutoUpgrade.exe	<WinLoG>	Auto-upgrade program
*.dct	<WinLoG>	Dictionaries for spell checker
*.bmp	<WinLoG>\Bitmaps	Bitmap symbols
winlog.chm	<WinLoG>	HTML Help file
gaeaproject.mdb	<WinLoG Database>	Master project database
winlog.mdb	<WinLoG Database>	WinLoG master database
winlogBlank.mdb	<WinLoG Database>	Blank WinLoG project database
LogPlotKey.mdb	<WinLoG Database>	Database which contains conversion codes used to import gINT and LogPlot
CompletedTutorialwinlog.mdb	<WinLoG Database>\CompletedTutorial	Completed tutorial database
Sampleswinlog.mdb	<WinLoG Database>\Samples	Sample WinLoG project
gaea.ttf	<Windows Fonts>	GAEA symbol font
Dao350.dll	<Common Files>\Microsoft Shared\DAO	Access database driver
Dao2535.tlb	<Common Files>\Microsoft Shared\DAO	Access database driver
Msjet35.dll	<Windows System>	Access database driver
Msjter35.dll	<Windows System>	Access database driver
Msjint35.dll	<Windows System>	Access database driver
Vbar332.dll	<Windows System>	Access database driver
Vb5db.dll	<Windows System>	Access database driver
Vbajet32.dll	<Windows System>	Access database driver
Msrd2x35.dll	<Windows System>	Access database driver
Msrepl35.dll	<Windows System>	Access database driver
Expsrv.dll	<Windows System>	Access database driver
Oleaut32.dll	<Windows System>	Access database driver
Olepro32.dll	<Windows System>	Access database driver
Stdole2.tlb	<Windows System>	Access database driver
Asycfilt.dll	<Windows System>	Access database driver
Hhctrl.ocx	<Windows System>	HTML Help driver
Riched32.dll	<Windows System>	Rich Text driver
RichEd20.dll	<Windows System>	Rich Text driver

<WinLoG> - WinLoG program directory specified during installation
<WinLoG Database> - WinLoG database directory specified during installation
<Windows Fonts> - Microsoft Windows font directory, typically "\Windows\Fonts"
<Common Files> - Microsoft Windows common files directory, typically "\Program Files\Common Files"
<Windows System> - Microsoft Windows system directory, typically "\Windows\System"

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